

WHITE RIVER BASIN SURVEY: EAST FORK WHITE RIVER, 2003

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EXECUTIVE SUMMARY

- Nineteen, approximately one mile reaches of the East Fork White River, spanning over 180 river miles, were sampled beginning at the confluence with the White River and ending near Columbus, Indiana. Fish and habitat data were collected at each sampling reach.
- All sampling efforts yielded 14,753 fish weighing approximately 3,426 lbs, representing 17 families and 86 species. Crews collected 69 species via electrofishing and an additional 17 species via seines. Sportfish comprised approximately 9% of the total sample by number and 18% by weight.
- For combined electrofishing and seining data, IBI scores ranged from 34 to 58 of a maximum of 60. There was no significant correlation between QHEI and IBI scores for all reaches. Of 19 sampling reaches, 11 were scored as “fair” or lower.
- Channel catfish in the EFWR grew at similar rates to channel catfish in the non-commercial fishing zone of the Wabash River. At the current estimates of annual mortality, natural mortality, and exploitation, growth overfishing was not occurring for channel catfish in the EFWR. If, however, exploitation increased from about 16% to 25%, growth overfishing would be occurring at the current minimum size limit of 10 in.
- The current 10 in TL minimum size limit does not protect mature channel catfish because they reach 10 in TL by age 2 and female channel catfish do not reach sexual maturity until age 3. According to creel data from 2003, a 14 in minimum size limit would protect about 25% of the harvested channel catfish. It is recommended to form a work group to review catfish size limits for the state.
- There were at least 16 public access sites within the study area, which is approximately one site per 11 river miles. In general, biologists felt that ramp conditions were good and there were no suggestions for new access sites.

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INTRODUCTION

The East Fork White River (EFWR) begins in Bartholomew County and flows 239 mi southwest and joins the West Fork White River in Pike and Daviess Counties to form the White River. The EFWR drains approximately 5,725 mi² up to the confluence with the West Fork, which drains approximately 5,372 mi². Commercial fishing is allowed from where the Lost River empties into the EFWR (river mile 83) to the confluence with the Wabash River. There is one dam located in Williams, Indiana, which impedes fish from moving up river.

Major portions of the East Fork White River have not been surveyed by the IDNR while some portions have been surveyed sporadically. Currently, the IDNR does not have a comprehensive fish management or public access plan for the EFWR. The objective of this project was to collect fish community, fish habitat, and public access data to provide information needed to develop a river-wide management plan. Along with fish and public access data, recreational use data were collected in 2003 via a creel survey from April to October (Hoffman 2004).

METHODS

Nineteen, approximately one mile reaches of river were established beginning at the confluence with the White River (RM 1.0) and ending at RM 189.1 near Columbus, Indiana (Figure 1; Table 1). Water chemistry data was collected at each reach according to the Manual of Fisheries Survey Methods (Shipman 2001). Habitat data was collected and scored at each reach according to the Qualitative Habitat Evaluation Index (QHEI) (Rankin 1989). Fish were sampled using boat-mounted DC electrofishing gear and sampling followed standard protocol for rivers and streams in Indiana (Shipman 2001). Each bank of the reach was sampled with approximately 0.5 h of effort. Additionally, a minimum of four seine hauls were conducted at each reach. All fish were measured to the nearest 0.1 in TL. Fish weights were estimated using weight-length regressions. Scales were collected from a subsample of five fish per 0.5 in-group of sportfish. Age-length keys were constructed to calculate mean length at age. Growth was analyzed by fitting a von Bertalanffy growth equation, using Fishery Analyses and Simulation Tools software (FAST; Slipke and Maceina). An IBI score was assigned to each reach based upon the methods of Simon (1998).

RESULTS

Water chemistry and fish habitat

Water chemistry data were within ranges adequate to sustain fish survival (Table 2). Secchi disk measurements ranged from 12 to 59 in. Dissolved oxygen ranged from 4.1 to 12 ppm. Conductivity measurements were normal and ranged from 320 to 600 μ S. Water temperatures ranged from 64 to 74 °F. Fish habitat scores (QHEI) ranged from 40.5 to 84 and averaged 65.2 for all reaches (Table 3). From the mouth of the EFWR up to RM 119.6, QHEI scores varied greatly compared to QHEI scores from sampling reaches above RM 119.6.

Fisheries survey data

All sampling efforts yielded 14,753 fish weighing approximately 3,426 lbs, representing 17 families and 86 species. Crews collected 69 species via electrofishing and an additional 17 species via seines. Spotfin shiner was the most abundant species (16%), followed by gizzard shad (13%), bullhead minnow (12%), and bigeye chub (9%). Smallmouth buffalo (15%) was the most abundant species collected by weight, followed by gizzard shad (11%), common carp (10%), and freshwater drum (10%). Sportfish comprised approximately 9% of the total sample by number and 18% by weight. There were 22 species, most of them small cyprinids, collected above Williams Dam that were not collected below the dam (Appendix). There were 13 species collected below Williams Dam that were not collected above the dam. Many of these species would be expected to make spawning runs, which would be inhibited by the dam (e.g. shovelnose sturgeon, walleye, white bass).

For combined electrofishing and seining data, IBI scores ranged from 34 to 58 of a maximum of 60. There was no significant correlation between QHEI and IBI scores for all reaches ($R = 0.2478$; $P = 0.306$). However, it is interesting to note that IBI and QHEI scores were positively correlated only when the stations above Williams Dam were included in the analysis ($R = 0.6385$; $P = 0.025$). The average IBI score was 43 (median = 44), which is considered “fair.” Six of 19 sampling stations scored “good” or better. Of 19 sampling reaches, 11 were scored as “fair” or lower.

Carp and minnow family (Cyprinidae)

The Cyprinidae family comprised 26 species and accounted for 64% of the total number of fish collected and 11% of the total weight of fish collected. Spotfin shiner, bullhead minnow, and bigeye chub were among the most abundant species in this family. Grass carp, pugnose shiner and silverband shiner were among the least collected species. Seining accounted for over 86% of the fish collected from this family.

Herring family (Clupeidae)

Gizzard shad and skipjack herring were the only representatives of the Clupeidae family and comprised 13% of the total sample by number and 11% by weight. Nearly all of the Clupeids were collected via electrofishing and they were mostly gizzard shad.

Sunfish family (Centrarchidae)

The Centrarchidae family comprised 12 species and represented 6% of the total sample by number and weight. Spotted bass was the most numerous sunfish species, representing almost 4% of the total sample. Spotted bass were collected at every sampling reach and spotted bass up to 14.7 in TL were collected (Figure 2). Spotted bass grew fast ($K = 0.6$) up to age 4, but older fish may not have been accurately aged because growth becomes linear after age 4 (Table 4). Annual mortality was estimated to be 52% ($\pm 3\%$). Exploitation of spotted bass was likely very low (Hoffman 2004) and corresponding yield would not change if minimum size limits were reduced. However, mean TL would decrease if a smaller minimum size limit were established.

Longear sunfish and bluegill were the next most common sunfish species. Longear sunfish up to 6.7 in TL and bluegill up to 7.8 in TL were collected.

Smallmouth bass was the next numerous sunfish species collected and smallmouth bass up to 17.8 in TL were collected. There was a peak in the length frequency distribution around 3 in TL and a peak around 7 in TL (Figure 2). The PSD was 33, the RSD-P was 14, and the RSD-M was 10. Smallmouth bass grew fast initially ($K = 0.5$), but growth quickly slowed down after age 3 (Table 4). Ages older than five were likely underestimated.

Largemouth bass, white crappie, black crappie, and redear sunfish were collected in small numbers. Warmouth and orangespotted sunfish were collected in even smaller numbers.

Sucker family (Catostomidae)

The Catostomidae family comprised 14 species and represented only 5% of the total sample by number, but over 45% by weight. Golden redhorse, river carpsucker, and smallmouth buffalo were among the most abundant species of this family and they were collected at 73% or more of the sampling reaches. Shorthead redhorse, silver redhorse, black redhorse, quillback, and northern hog sucker were collected in fewer numbers. Other species collected were bigmouth buffalo, highfin carpsucker, black buffalo, and spotted sucker. Approximately 93% of the individuals from this family were collected via electrofishing.

Livebearer family (Poeciliidae)

The Poeciliidae family is represented by one species, the western mosquitofish. This species accounted for almost 4% of the total number of fish collected. Western mosquitofish were collected at 10 of the 19 sampling reaches.

Catfish family (Ictaluridae)

The Ictaluridae family comprised five species, accounting for 2% of the total number and 10% of the total weight collected. Channel catfish was the most abundant species of this family, accounting for almost 2% of the total number and nearly 8% of the total weight collected. Channel catfish were collected at all sampling reaches except one (RM 166.6). The length-frequency distribution resembled a normal distribution, excluding the peak at 2 in, which were age-0 fish. The PSD for channel catfish was 69 and the RSD-P was 7. Channel catfish ranged from 1.2 to 27.5 in TL (Figure 2) and weighed up to 7.9 lbs. Growth and mortality data could not be separated between commercial and non-commercial reaches of the EFWR due to low sample size; thus, data were combined and analyzed. Based on the slope of the von Bertalanffy regression, channel catfish in the EFWR grew at similar rates ($K = 0.165$) to channel catfish in the non-commercial reach of the Wabash River ($K = 0.167$; Colombo et al.). Annual mortality of channel catfish in the EFWR was estimated to be 34% ($\pm 7\%$), which was similar to estimates from the Wabash River. Based on natural mortality estimates from the Wabash River (25%), exploitation of channel catfish in the EFWR would be between 2 and 16%. Data were entered into Fishery Analyses and Simulation Tools software and Beverton-Holt yield-per-recruit models were constructed. At the current minimum size limit of 10 in, natural mortality of 25%, and

exploitation up to 16%, channel catfish were not experiencing growth overfishing (Figure 3). If exploitation increased to 25% or greater, growth overfishing would occur.

Flathead catfish was the next most abundant species in the Ictaluridae family. Flathead catfish ranged from 4.0 to 33.1 in TL, accounting for 3% of the total sample. The majority of the flathead catfish were between 6 and 16 in TL (Figure 2). Sample sizes were too small to analyze growth beyond age 5. Flathead catfish in the EFWR ($K = 0.176$; Table 4) grew slower than in the Wabash River ($K = 0.303$).

Other members of the Ictaluridae family were the freckled madtom, brindled madtom, and the mountain madtom. These were collected in low numbers at very few sampling reaches.

Perch family (Percidae)

The Percidae family comprised 13 species, accounting for less than 2% of the total sample by weight and number. There were 11 darter species collected and the other two species were walleye and sauger. One spotted darter, a species of special concern in Indiana, was collected at RM 75.4. Only one walleye was collected that was 23.0 in TL. Sauger ranged from 11.5 to 19.8 in TL and were collected at 13 of the 19 sampling stations.

Drum family (Sciaenidae)

Freshwater drum was the only species collected from this family. Freshwater drum ranged from 7.3 to 24.9 in TL (Figure 2) and they accounted for less than 2% of the total sample by number and almost 10% of the total sample by weight. Freshwater drum were collected at 17 of 19 sampling reaches. Growth was nearly linear up to age 8, which may be a result of underestimating age with scales above age 5. Freshwater drum reached 15 in TL by age 4 and 19 in TL by age 6. Annual mortality was estimated to be 48% ($\pm 6\%$) and based on an estimate of natural mortality between 22 and 34%, exploitation would have been between 14 and 26%. At 26% exploitation, freshwater drum may be experiencing growth overfishing with no minimum size limit (Figure 4). Increasing the size limit to 14 in TL would not increase yield substantially, but would protect more fish and increase mean harvested size.

Silverside family (Atherinidae)

The only representative of this family was the brook silverside. Brook silverside ranged from 1.1 to 3.1 in TL and were collected at 12 of 19 sampling reaches.

Gar family (Lepisosteidae)

The Lepisosteidae family comprised three species and accounted for less than 1% of the total sample by number and nearly 4% by weight. Shortnose gar was the most abundant gar species, followed by longnose gar and spotted gar. Longnose gar ranged from 15.8 to 43.0 in TL. Shortnose gar up to 24.2 in TL were collected. Gar were collected at about half of the sampling reaches.

Mooneye family (Hiodontidae)

Two members of the Hiodontidae family were collected, which represented less than 1% of the total sample in both number and weight. Goldeye up to 17.8 in TL and mooneye up to 11.6 in TL were collected. Both species were all collected in the lower portion of the river, from RM 1.0 to 54.7.

Killifish family (Fundulidae)

Northern studfish and blackstripe topminnow were the only members collected from the Fundulidae family. Northern studfish were only collected at one sampling reach, which was the upper most site (RM 189.1). Blackstripe topminnow were collected at 5 of 19 sampling reaches.

Lamprey family (Petromyzontidae)

The Petromyzontidae family comprised two species. The chestnut lamprey was collected at 7 of 19 sampling reaches and the silver lamprey was only collected at two sampling reaches.

Temperate bass family (Percichthyidae)

The only species of this family collected was white bass. White bass ranged from 4.3 to 13.1 in TL. White bass were only collected at two sampling reaches.

Pike family (Esocidae)

The only species of this family collected was the grass pickerel. The grass pickerel was collected at three sampling reaches.

Sculpin family (Cottidae)

Only one individual mottled sculpin was collected and it was from the upper-most sampling reach.

Sturgeon family (Acipenseridae)

Only one individual shovelnose sturgeon was collected in the lower river at RM 26.1.

DISCUSSION

Surprisingly, there was no relation between IBI and QHEI scores if all stations were included in the analysis. There was, however, a relationship between QHEI and IBI scores only when stations above Williams Dam that had drainage areas less than 4,000 mi² were included. There are most likely problems with one or both methods when they are applied to large rivers, because both the QHEI and the IBI were originally developed for smaller rivers and streams. One would assume that higher habitat scores across a broad region would relate to higher scores of biotic integrity if the two indices were calibrated correctly, but the data from this survey does not support that assumption.

Despite low QHEI and IBI scores, the EFWR fish community represents a highly diverse fish community that was comprised of at least 86 species, including one state endangered species (lake sturgeon) and one state species of special concern (spotted darter). Lake sturgeon were not collected in this survey; however, they are currently monitored with radio telemetry below Williams Dam by IDNR personnel. The majority of the fish species collected in this survey were collected via electrofishing, but seining added an additional 17 species. Sportfish composition by number in this study (9%) was less than a study on the Wabash River in 1999 (17%). However, sportfish composition by weight (18%) was slightly greater in this study than the Wabash River (13%). Common carp composed a large proportion (44%) of the total catch by weight from the Wabash, but only composed 10% of the catch by weight in this survey. Gizzard shad were prevalent in both surveys, accounting for greater than 13% by number. There

was only one species (American eel) that was collected in a previous survey of the EFWR (Andrews 1992) that was not collected in the current study, but this species is rarely collected with standard methods and would not be expected to show up in all samples.

There were at least 16 public access sites within the study area, which is approximately one site per 11 river miles. In general, biologists felt that ramp conditions were good and there were no suggestions for new access sites. Currently, there were no access sites recommended for acquisition on the EFWR.

Most sport species, like largemouth bass and other sunfish species were captured in low numbers relative to nongame fish species, which was expected. Channel catfish and drum, however, were greater in relative abundance and these species seemed to be the most caught and preferred fish species by anglers in the EFWR. Preliminary data from a statewide angler survey shows that channel catfish are ranked sixth in preference. When you add up the preferences for all catfish, they are more likely to be within the top three preferred fish species in the state. Thus, proper management of channel catfish and other catfish species in rivers is imperative.

At the current estimates of annual mortality, natural mortality, and exploitation, growth overfishing was not occurring for channel catfish. If, however, exploitation increased from about 16% to 25%, growth overfishing would be occurring at the current minimum size limit of 10 in. This is dangerously close to reaching maximum sustainable yield with the possibility of over-harvesting channel catfish. If the minimum size limit were increased to 14 in, at 26% exploitation, yield would increase by approximately 10%. Mean TL of harvested fish would increase by 20% or from 13.9 to 16.7 in TL if a 14 in minimum size limit were established. The current minimum size limit does not protect sexually mature fish. Female channel catfish do not reach sexual maturity until age 3 (Colombo et al. 2005) and fish in the EFWR reached 10 in by age 2. According to creel data from 2003 (Hoffman 2004), a 14-in minimum size limit would protect about 25% of the harvested channel catfish. If a 14-in minimum size limit was established, growth overfishing would be highly unlikely with the current population parameters. It would be interesting to further investigate channel catfish populations in the EFWR and compare differences between growth and mortality of fish in the commercial fishing reaches and the non-commercial fishing reaches, as did Colombo et al. (2005) on the Wabash River.

Freshwater drum populations also require proper management, because freshwater drum are a large proportion of angler catches in the EFWR. According to a creel survey of the EFWR

in 2003, freshwater drum ranked second in catch and harvest next to channel catfish (Hoffman 2004). Freshwater drum growth was nearly linear up to age 8, but this was probably due to error in estimating age of fish using scales above age 3. At the current rates of annual mortality and natural mortality, exploitation of freshwater drum was probably between 14 and 26%. At these levels of mortality, freshwater drum may be experiencing growth overfishing with no minimum size limit. There would be no increase in yield if a 14 in TL minimum size limit were established, but mean length of harvested fish would increase and more fish would be protected to maturity. Mean length of harvested freshwater drum was 11.4 in TL (± 0.14 in) in 2003 (Hoffman 2004). Anglers started harvesting freshwater drum at 6 in TL. More data on freshwater drum will be collected in future surveys, which will add to the current information.

RECOMMENDATIONS

- According to data from this report and data from the Wabash River regarding channel catfish, the current 10 in TL minimum size limit does not protect mature fish because channel catfish reach 10 in TL by age 2 and female channel catfish do not reach sexual maturity until age 3. It is recommended to form a work group to review catfish size limits for the state.

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Table 1. Station location, drainage area, flow, gradient, sample distance, average width, average and maximum depth, East Fork White River, September 2003.

River mile	County	Nearest town	Drainage area (mi ²)	Gradient (ft/mi)	Sample distance (ft)	Average width (ft)	Average depth (in)	Maximum depth (in)
1.0	Davies/Pike	Petersburg	5,725	0.54	3,070	363.0	73.2	156.0
17.1	Davies/Dubois	Waco	5,619	0.86	3,861	307.0	69.6	120.0
26.1	Martin/Dubois	Haysville	5,581	0.86	5,082	286.0	102.0	159.6
40.9	Martin	Loogootee	5,124	0.83	5,019	277.0	64.8	139.2
42.1	Martin	Loogootee	5,118	0.75	4,064	298.0	99.6	122.4
54.7	Martin	Shoals	5,001	0.75	5,166	258.0	76.3	120.0
75.1	Lawrence	Williams	4,720	1.23	4,197	234.0	90.1	132.0
85.1	Lawrence	Williams	4,047	0.55	4,470	327.6	164.0	204.0
94.3	Lawrence	Bedford	4,047	0.55	3,870	302.4	69.5	99.0
106.4	Lawrence	Lawrenceport	3,861	0.55	4,782	236.4	63.5	95.0
119.6	Jackson/Washington	Fort Ritner	3,801	1.14	2,218	230.0	52.8	123.6
129.7	Jackson/Washington	Millport	3,717	1.43	2,587	192.0	62.4	151.2
136.9	Jackson	Medora	2,560	1.15	2,270	167.0	70.8	180.0
146.2	Jackson	Brownstown	2,516	1.32	2,746	198.0	48.0	82.8
154.5	Jackson	Brownstown	2,367	2.11	1,875	199.0	53.0	132.0
162.2	Jackson	Seymour	2,341	1.69	3,106	185.0	80.0	192.0
166.6	Jackson	Rockford	2,339	1.69	2,486	280.0	111.0	276.0
177.6	Bartholomew	Azalia	2,053	1.90	2,326	210.0	56.0	132.0
189.1	Bartholomew	Columbus	1,708	2.30	2,726	207.0	48.0	144.0

Table 2. Station water chemistry information, East Fork White River, September 2003.

River mile	Secchi disk (in)	Air temperature (°F)	Water temperature (°F)	Dissolved oxygen (ppm)	Conductivity (μ S)
1.0	22	65	67	10.8	552
17.1	15	71	69	8.5	576
26.1	20	63	69	9.1	552
40.9	18	64	72	8.8	566
42.1	18	64	72	8.8	566
54.7	14	76	74	8.2	540
75.1	15	68	69	8.9	600
85.1	14	77	70	9.2	560
94.3	30	77	66	7.8	600
106.4	24	77	68	7.4	560
119.6	22	78	67	NA	560
129.7	12	80	72	4.1	320
136.9	22	77	70	9.7	550
146.2	30	75	70	12.0	560
154.5	56	63	64	8.8	450
162.2	53	59	65	8.6	470
166.6	44	80	67	8.3	480
177.6	58	69	67	8.2	480
189.1	59	67	66	8.5	400

Table 3. Station Qualitative Habitat Evaluation Index (QHEI) metric component scores, East Fork White River, September 2003.

River mile	Substrate Max. 20	Cover Max. 20	Channel Max. 20	Riparian Max. 10	Pool Max. 12	Riffle Max. 8	Gradient Max. 10	Total 100	Percent Pool	Percent Run	Percent Riffle
1.0	13	11	12	7.1	0	0	6	49.1	0	100	0
17.1	20	12	13	5	9	4.5	8	71.5	10	80	10
26.1	20	11	13	4	8	7	8	71	15	70	15
40.9	13.75	17	16	9.3	9	7	8	80.05	30	60	10
42.1	3	10	11	8.5	0	0	8	40.5	0	100	0
54.7	19	14	13	8	11	6	8	79	30	50	20
75.1	20	13	15	6	12	8	10	84	40	30	30
85.1	3	13	11	6	9	0	8	50	100	0	0
94.3	14	12	10	7.5	10	0	8	61.5	10	90	0
106.4	15	11	13	6.5	12	6.5	8	72	40	40	20
119.6	12	12	12	3.5	9	0	10	58.5	10	90	0
129.7	13	12	12	7	9	0	10	63	10	90	0
136.9	14	13	12	5	10	0	10	64	20	80	0
146.2	13	12	12	6	10	0	10	63	20	80	0
154.5	13	13	13	9	12	7	10	77	30	69	1
162.2	12	13	13	6.25	10	0	10	64.25	40	60	0
166.6	12	12	13	8	10	0	10	65	80	20	0
177.6	12	13	11	5.5	10	0	10	61.5	40	60	0
189.1	13	13	11	6	11	0	10	64	25	75	0

Table 4. Number, mean length at age, and standard error determined from age-length keys for selected species in fall 2003, East Fork White River.

Common name	Statistic	Age											
		1	2	3	4	5	6	7	8	9	10	11	12
Channel catfish	Mean	7.6	10.8	12.7	15.5	16.8	19.2	18.6	20.2	22.4	23.6	27.1	22.4
	SE	0.45	0.31	0.30	0.26	0.29	0.44	0.44	0.59	0.69	NA	0.50	1.89
	N	6	14	7	24	26	15	11	13	13	1	2	2
Flathead catfish	Mean	8.0	10.9	12.5	15.7	16.4	23.6	NA	17.9	18.8	27.6		
	SE	0.31	0.28	0.52	0.71	0.53	1.0	NA	1.33	1.29	NA		
	N	4	20	5	8	5	2	0	2	2	1		
Freshwater drum	Mean	8.1	11.7	12.8	15.3	16.5	19.2	20.9	23.6				
	SE	0.16	0.20	0.12	0.26	0.36	0.37	0.42	0.71				
	N	29	38	74	34	13	17	4					
Sauger	Mean	11.8	14.6	15.2	17.7	18.8							
	SE	0.20	0.58	0.21	0.35	0.37							
	N	5	4	6	11	5							
Smallmouth bass	Mean	4.1	8.6	12.6	13.6	NA	16.6	18.6					
	SE	0.25	0.32	0.00	NA	NA	1.00	NA					
	N	44	17	3	1	0	2	1					
Spotted bass	Mean	6.6	9.0	10.0	10.7	12.1	13.1	14.3					
	SE	0.07	0.07	0.09	0.09	0.12	0.19	0.25					
	N	243	93	30	21	24	12	4					

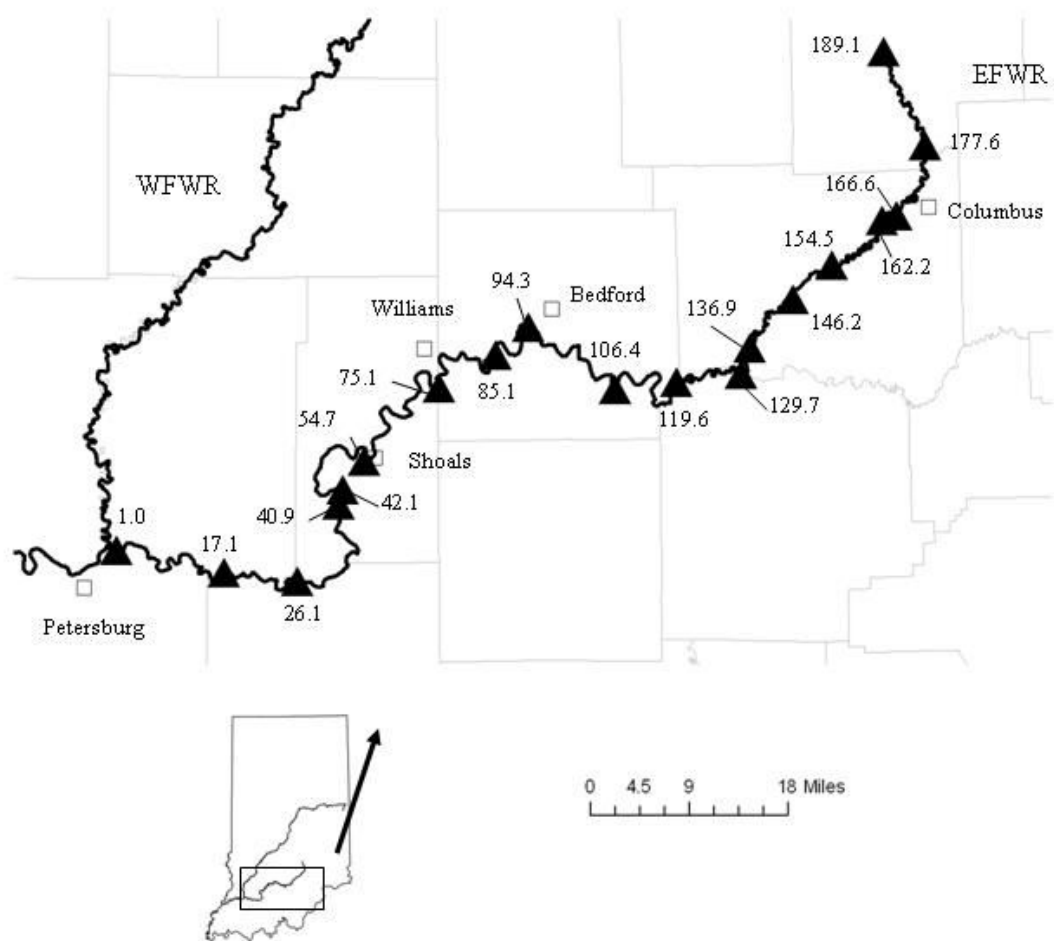


Figure 1. Sampling sites on the East Fork White River, 2003.

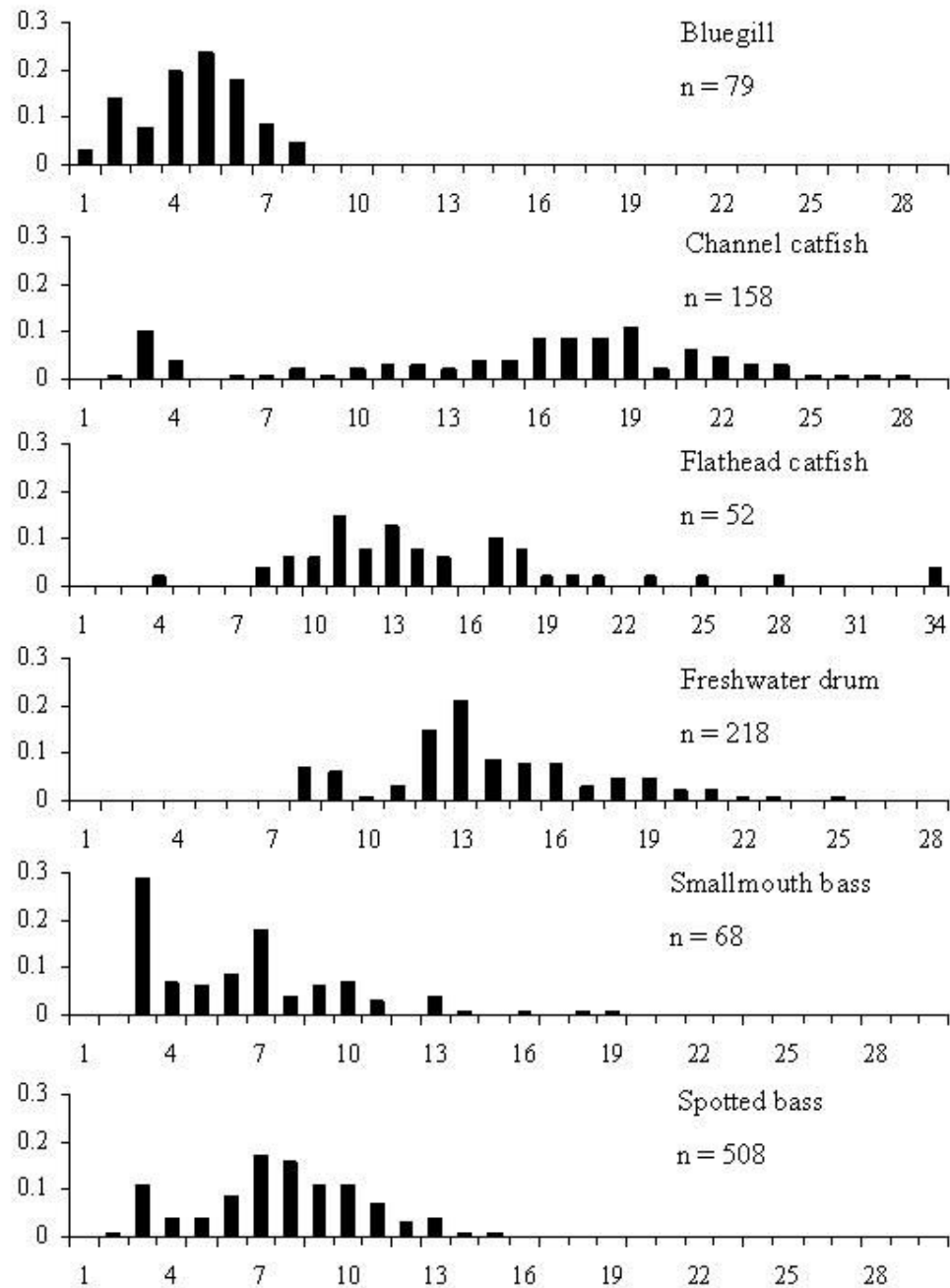


Figure 2. Length-frequency distribution of bluegill, channel catfish, flathead catfish, freshwater drum, smallmouth bass, and spotted bass collected in the East Fork White River, 2003.

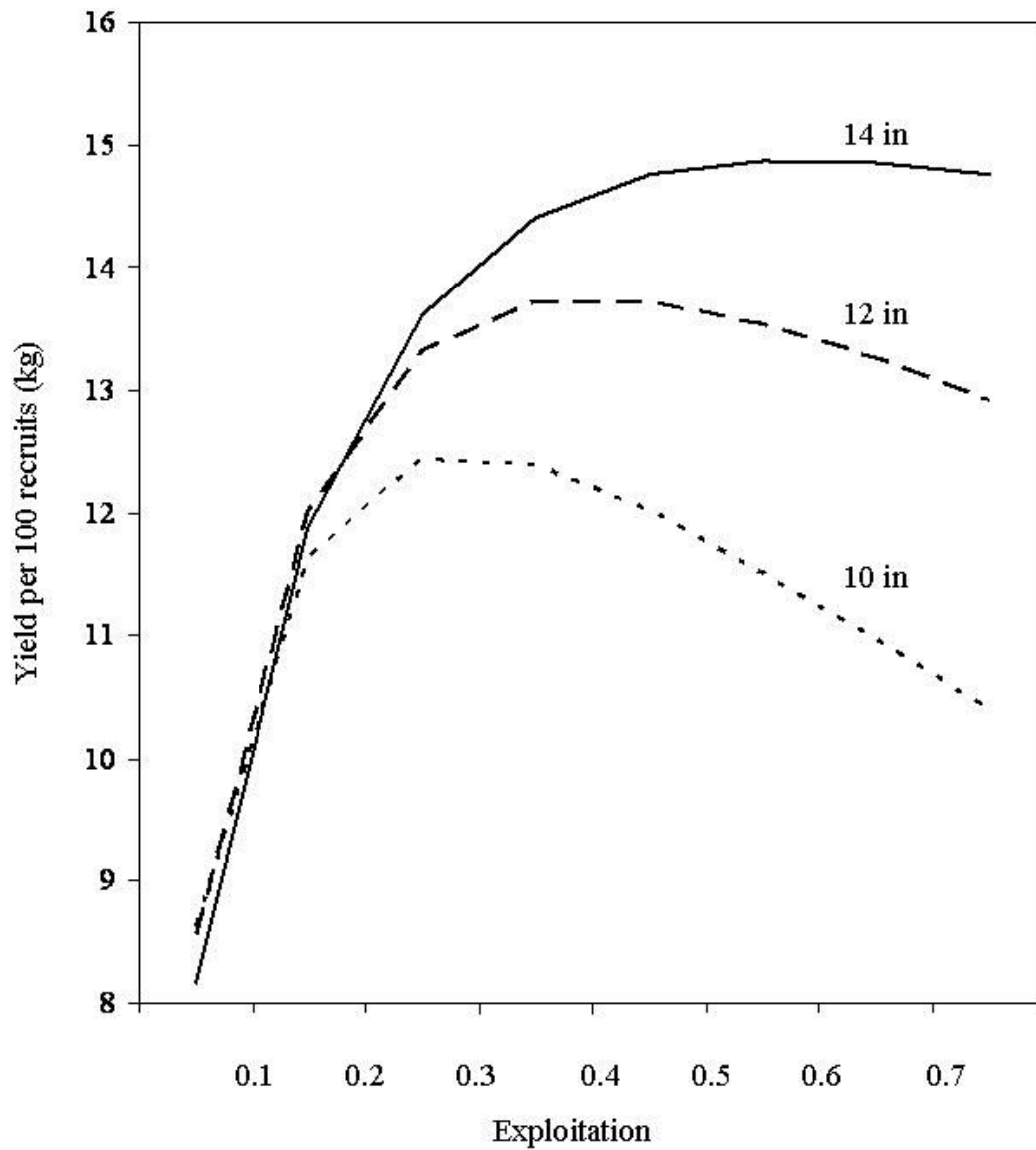


Figure 3. Yield per recruit modeled for channel catfish at different size limits across a range of exploitation rates and a conditional natural mortality rate of 25%, East Fork White River. The current minimum size limit is 10 in TL.

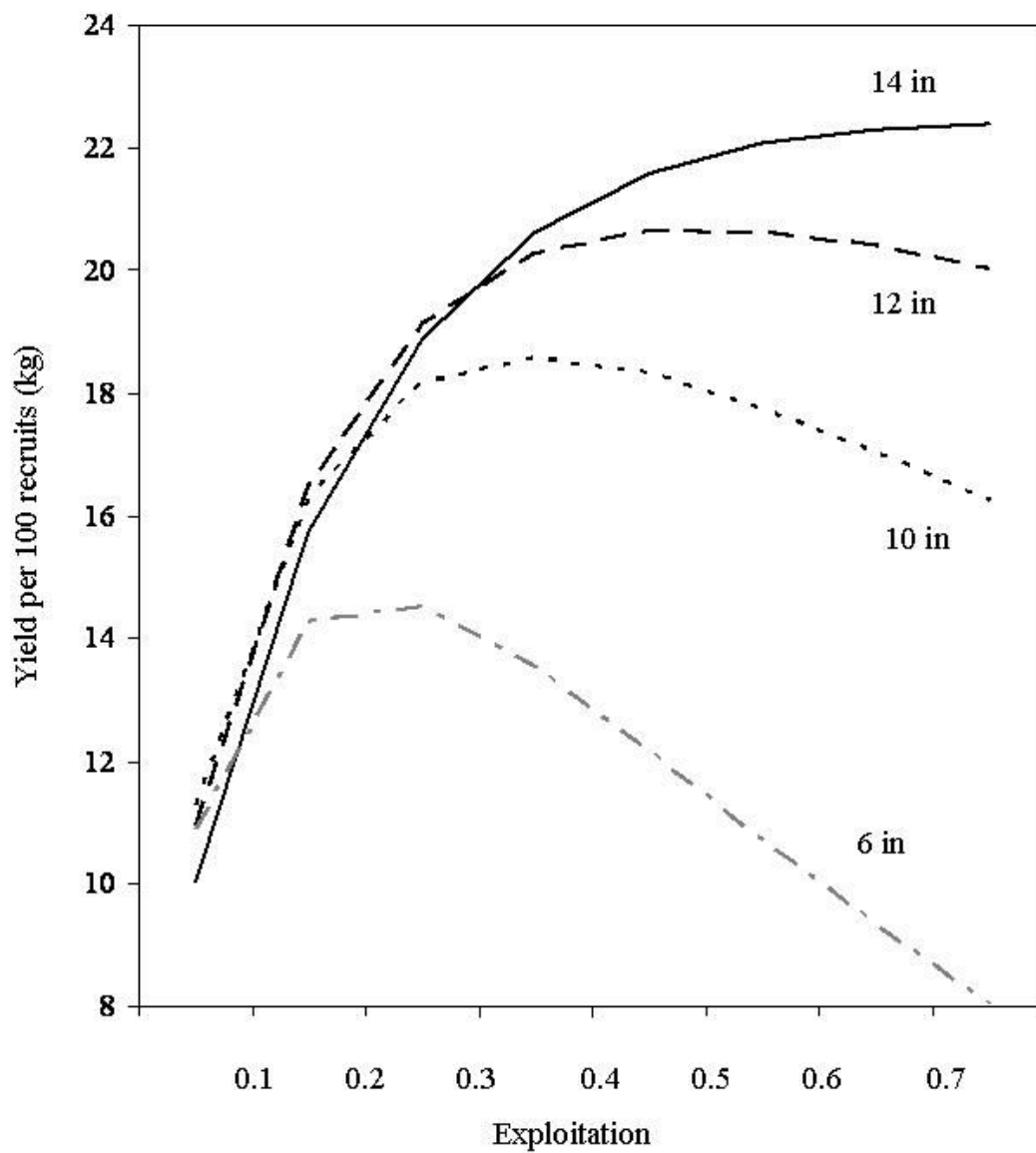


Figure 4. Yield per recruit modeled for freshwater drum at different size limits across a range of exploitation rates and a conditional natural mortality rate of 25%, East Fork White River. A 6 in minimum size limit represents the minimum size when anglers began harvesting freshwater drum.

APPENDIX A

LIST OF ACCESS SITES ON THE EFWR BY COUNTY

Appendix A. List of public access sites on the EFWR by county.

Bartholomew

Azalia Bridge, 1.5 miles N of Jonesville on SR 11, then 1.1 miles on CR 800S
Columbus, Water St.

Davies

Glendale FWA

Portersville Bridge, 0.4 mile north of Portersville on CR 1100E

Jackson

Bell Ford, 3 miles W of Seymour on SR 258

Brownstown PFA, 0.4 miles W of Brownstown on US 50

Medora, 1 mile E of Medora on SR 235

Rockford, 3 miles W of Rockford on CR 725N

Sparksville, 0.5 mile E of Sparksville on Sparksville Pike

Lawrence

Bedford 2.5 miles south of Bedford, on SR 37

Lawrenceport, 0.1 mile E of Spring Mill State Park on SR 60, then 3.7 miles N on CR500E

Williams Dam, below Williams Dam off SF 450

Spice Valley, above Williams Dam

Martin

Hindostan Falls, five miles east of Loogootee off SR 550 to Hindostan Falls Public Fishing Area

Shoals, north of US 50 in Shoals

Washington

White-Muscatatuck, 5 miles W of Milport on Wheeler Hollow Rd.

APPENDIX B

NAME, NUMBER, PERCENTAGE, SIZE, WEIGHT, AND OCCURRENCE INDEX OF FISHES
COLLECTED, EAST FORK WHITE RIVER, SEPTEMBER 2003

Appendix B. Name, number, percentage, size, weight, and occurrence index of fishes collected, East Fork White River, September 2003 (all gears combined).

Common name	Scientific name	Total number	% by number	Min.	Max.	Total weight (lb)	% by weight	Occurrence index
Spotfin shiner	Cyprinella spiloptera	2,315	15.7	0.4	3.5	3.99	0.1	19
Gizzard shad	Dorosoma cepedianum	1,957	13.3	1.1	13.8	390.67	11.4	19
Bullhead minnow	Pimephales vigilax	1,714	11.6	0.7	3.0	6.11	0.2	13
Bigeye chub	Notropis amblops	1,358	9.2	1.1	3.1	3.86	0.1	8
Steelcolor shiner	Cyprinella whipplei	1,059	7.2	0.8	4.1	3.39	0.1	19
MS silvery minnow	Hybognathus nuchalis	931	6.3	0.8	4.0	5.13	0.1	12
Sand shiner	Notropis stramineus	927	6.3	1.0	2.5	2.05	0.1	12
Bluntnose minnow	Pimephales notatus	595	4.0	0.6	3.1	1.38	*	17
Spotted bass	Micropterus punctulatus	543	3.7	1.6	14.7	142.07	4.1	19
Western mosquitofish	Gambusia affinis	532	3.6	0.6	1.9	0.41	*	10
Channel catfish	Ictalurus punctatus	246	1.7	1.2	27.5	258.16	7.5	18
Freshwater drum	Aplodinotus grunniens	218	1.5	7.3	24.9	337.77	9.9	17
Emerald shiner	Notropis atherinoides	206	1.4	0.7	4.3	1.83	0.1	12
Golden redhorse	Moxostoma erythrurum	189	1.3	2.0	17.8	111.2	3.2	14
Longear sunfish	Lepomis megalotis	155	1.1	0.6	6.7	9.27	0.3	15
River carpsucker	Carpionodes carpio	123	0.8	5.8	19.5	214.11	6.2	18
Smallmouth buffalo	Ictiobus bubalus	121	0.8	0.9	29.6	521.89	15.2	17
Bluegill	Lepomis macrochirus	120	0.8	0.6	7.8	6.62	0.2	17
Brook silverside	Labidesthes siculus	117	0.8	1.1	3.1	0.29	*	12
Rosyface shiner	Notropis rubellus	98	0.7	1.5	2.4	0.18	*	5
Smallmouth bass	Micropterus dolomieu	73	0.5	2.2	17.8	19.04	0.6	13
Common carp	Cyprinus carpio	71	0.5	6.0	27.0	351.21	10.3	17
Shorthead redhorse	Moxostoma macrolepidotum	65	0.4	2.8	21.0	56.52	1.6	15
Silver redhorse	Moxostoma anisurum	64	0.4	2.7	24.2	106.04	3.1	14
Eastern sand darter	Ammocrypta pellucida	58	0.4	1.3	2.5	0.17	*	11
Suckermouth minnow	Phenacobius mirabilis	57	0.4	2.0	3.9	0.5	*	5
Flathead catfish	Pylodictis olivaris	52	0.4	4.0	33.1	98.06	2.9	17
Black redhorse	Moxostoma duquesnei	49	0.3	2.3	13.6	14.92	0.4	5
Shortnose gar	Lepisosteus platostomus	46	0.3	16.0	24.2	58.16	1.7	10
Quillback	Carpionodes cyprinus	42	0.3	3.5	18.3	12.93	0.4	6
Logperch	Percina caprodes	39	0.3	2.7	6.0	0.97	*	6
Dusky darter	Percina sciera	36	0.2	1.4	4.2	0.41	*	11
Sauger	Sander canadense	36	0.2	11.5	19.8	43.84	1.3	13
Central stoneroller	Camptostoma anomalum	34	0.2	1.7	3.4	0.17	*	6
Longnose gar	Lepisosteus osseus	33	0.2	15.8	43.0	69.48	2.0	11
Mimic shiner	Notropis volucellus	30	0.2	0.8	2.5	0.07	*	6
Northern hog sucker	Hypentelium nigricans	29	0.2	2.7	12.5	1.95	0.1	7
Striped shiner	Luxilus chrysocephalus	28	0.2	1.3	2.5	0.11	*	6
Blue sucker	Cycleptus elongatus	26	0.2	21.0	27.8	136.83	4.0	7
Johnny darter	Etheostoma nigrum	26	0.2	1.7	2.3	0.07	*	7
Bigmouth buffalo	Ictiobus cyprinellus	23	0.2	15.8	25.2	138.47	4.0	7
Silverjaw minnow	Notropis buccatus	22	0.1	1.0	2.7	0.08	*	5
River redhorse	Moxostoma carinatum	21	0.1	6.1	26.6	102.39	3.0	11
Goldeye	Hiodon alosoides	20	0.1	10.1	17.8	17.76	0.5	6
Slenderhead darter	Percina phoxocephala	18	0.1	2.3	3.4	0.18	*	6
Chestnut lamprey	Ichthyomyzon castaneus	17	0.1	6.8	9.2	0.8	*	7
Ghost shiner	Notropis buechanani	16	0.1	1.6	1.8	0.06	*	5
Mooneye	Hiodon tergisus	16	0.1	5.5	11.6	4.89	0.1	4
Northern studfish	Fundulus catenatus	16	0.1	1.1	3.4	0.11	*	1
Highfin carpsucker	Carpionodes velifer	15	0.1	5.6	13.2	7.17	0.2	8
Black buffalo	Ictiobus niger	13	0.1	21.1	31.6	125.01	3.6	7
Largemouth bass	Micropterus salmoides	12	0.1	2.5	14.5	6.65	0.2	8
Gravel chub	Erimystax x-punctatus	10	0.1	1.2	2.7	0.03	*	2
White bass	Morone chrysops	10	0.1	4.3	13.1	5.97	0.2	2
White crappie	Pomoxis annularis	9	0.1	6.4	11.6	3.15	0.1	4
Greenside darter	Etheostoma blennioides	8	*	1.8	2.8	0.05	*	4
Green sunfish	Lepomis cyanellus	7	*	1.6	4.7	0.13	*	4
Black crappie	Pomoxis nigromaculatus	6	*	4.2	10.6	2.62	0.1	6
Blackstripe topminnow	Fundulus notatus	6	*	1.4	2.5	0.03	*	5
Creek chub	Semotilus atromaculatus	6	*	2.0	2.2	0.03	*	2
Redear sunfish	Lepomis microlophus	6	*	2.1	8.1	0.83	*	5

Speckled chub	<i>Macrhybopsis aestivalis</i>	6	*	1.5	2.1	0.02	*	2
Harlequin darter	<i>Etheostoma histrio</i>	5	*	2.0	2.4	0.03	*	4
Silver shiner	<i>Notropis photogenis</i>	5	*	2.7	3.3	0.03	*	2
Skipjack herring	<i>Alosa chrysochloris</i>	5	*	7.0	10.2	1.15	*	5
Mountain madtom	<i>Noturus eleutherus</i>	4	*	1.3	1.5	0.02	*	4
Spotted sucker	<i>Minytrema melanops</i>	4	*	7.3	18.3	4.76	0.1	1
	<i>Esox americanus</i>							
Grass pickerel	<i>vermiculatus</i>	3	*	5.2	7.3	0.16	*	3
Rainbow darter	<i>Etheostoma caeruleum</i>	3	*	1.8	2.0	0.02	*	2
Brindled madtom	<i>Noturus miurus</i>	2	*	0.9	1.3	0.01	*	1
Freckled madtom	<i>Noturus nocturnus</i>	2	*	2.6	4.5	0.05	*	1
Mud darter	<i>Etheostoma asprigene</i>	2	*	2.8	2.8	0.01	*	2
Silver lamprey	<i>Ichthyomyzon unicuspis</i>	2	*	8.1	8.3	0.11	*	2
Streamline chub	<i>Erimystax dissimilis</i>	2	*	2.8	2.9	0.01	*	1
Warmouth	<i>Lepomis gulosus</i>	2	*	3.2	4.2	0.07	*	1
Grass carp	<i>Ctenopharyngodon idella</i>	1	*	23.7	23.7	5.15	0.2	1
Hybrid sunfish	<i>Lepomis sp. x Lepomis sp.</i>	1	*	4.0	4.0	0.04	*	1
Mottled sculpin	<i>Cottus bairdi</i>	1	*	2.2	2.2	0.01	*	1
Orangespotted sunfish	<i>Lepomis humilis</i>	1	*	1.9	1.9	0.01	*	1
Orangethroat darter	<i>Etheostoma spectabile</i>	1	*	1.6	1.6	**	*	1
Pugnose minnow	<i>Opsopoeodus emiliae</i>	1	*	1.8	1.8	**	*	1
	<i>Scaphirhynchus</i>							
Shovelnose sturgeon	<i>platyrhynchus</i>	1	*	22.0	22.0	0.93	*	1
Silverband shiner	<i>Notropis shumardi</i>	1	*	1.9	1.9	0.01	*	1
Spotted darter	<i>Etheostoma maculatum</i>	1	*	2.5	2.5	0.01	*	1
Spotted gar	<i>Lepisosteus oculatus</i>	1	*	23.3	23.3	1.45	*	1
Walleye	<i>Sander vitreum</i>	1	*	23.0	23.0	4.08	0.1	1
TOTALS		14,753				3,426.38		

86 SPECIES & 1 HYBRID

*=Less than 0.1% or less than 0.01 lbs.

APPENDIX C.

SPECIES, NUMBER, AND WEIGHT OF FAMILIES COLLECTED FROM THE EAST FORK WHITE RIVER, SEPTEMBER 2003

Appendix C. Species, number, and weight of families collected from the East Fork White River, September 2003 (all gear combined).

Family		Number	Percent	Weight	Percent
<u>Cyprinidae – Carps and Minnows</u>		9,493	64.3	385.40	11.2
Spotfin shiner	Mimic shiner				
Bullhead minnow	Striped shiner				
Bigeye chub	Silverjaw minnow				
Steelcolor shiner	Ghost shiner				
Mississippi silvery minnow	Gravel chub				
Sand shiner	Creek chub				
Bluntnose minnow	Speckled chub				
Emerald shiner	Silver shiner				
Rosyface shiner	Streamline chub				
Common carp	Grass carp				
Suckermouth minnow	Pugnose minnow				
Central stoneroller	Silverband shiner				
Spotfin shiner	Mimic shiner				
<u>Clupeidae - Herrings</u>		1,962	13.3	391.82	11.4
Gizzard shad	Skipjack herring				
<u>Centrarchidae - Sunfishes</u>		935	6.3	190.50	5.6
Spotted bass	Green sunfish				
Longear sunfish	Black crappie				
Bluegill	Redear sunfish				
Smallmouth bass	Warmouth				
Largemouth bass	Hybrid sunfish				
White crappie	Orangespotted sunfish				
<u>Catostomidae - Suckers</u>		784	5.3	1,554.19	45.4
Golden redhorse	Northern hog sucker				
River carsucker	Blue sucker				
Smallmouth buffalo	Bigmouth buffalo				
Shorthead redhorse	River redhorse				
Silver redhorse	Highfin carsucker				

Black redhorse	Black buffalo				
Quillback	Spotted sucker				
<u>Poeciliidae - Livebearers</u>		532	3.6	0.41	*
Western mosquitofish					
<u>Ictaluridae – Bullhead Catfish</u>		306	2.1	356.30	10.4
Channel catfish	Brindled madtom				
Flathead catfish	Freckled madtom				
Mountain madtom					
<u>Percidae - Perches</u>		234	1.6	49.84	1.5
Eastern sand darter	Harlequin darter				
Logperch	Rainbow darter				
Dusky darter	Mud darter				
Sauger	Orangethroat darter				
Johnny darter	Spotted darter				
Slenderhead darter	Walleye				
Greenside darter					
<u>Sciaenidae - Drums</u>		218	1.5	337.77	9.9
Freshwater drum					
<u>Atherinidae - Silversides</u>		117	0.8	0.29	*
Brook silverside					
<u>Lepisosteidae - Gars</u>		80	0.5	129.09	3.8
Shortnose gar	Spotted gar				
Longnose gar					
<u>Hiodontidae - Mooneyes</u>		36	0.2	22.65	0.7
Goldeye	Mooneye				
<u>Fundulidae - Killifishes</u>		22	0.1	0.14	*
Northern studfish	Blackstripe topminnow				
<u>Petromyzontidae - Lampreys</u>		19	0.1	0.91	*
Chestnut lamprey	Silver lamprey				

<u>Percichthyidae – Temperate bass</u>	10	0.1	5.97	0.2
White bass				
<u>Esocidae - Pikes</u>	3	*	0.16	*
Grass pickerel				
<u>Cottidae - Sculpins</u>	1	*	0.01	*
Mottled sculpin				
<u>Acipenseridae - Sturgeon</u>	1	*	0.93	*
Shovelnose sturgeon				
TOTALS	14,753		3,426.38	

86 SPECIES & 1 HYBRID
 * = less than 0.1%.

APPENDIX D

SPECIES COLLECTED BELOW AND ABOVE WILLIAMS DAM ON THE EAST FORK WHITE RIVER

Appendix D. Species collected below and above Williams Dam on the East Fork White River, Indiana, 2003.

Common name	Scientific name	Below	Above	Common name	Scientific name	Below	Above
Bigeye chub	<i>Notropis amblops</i>	No	Yes	Brook silverside	<i>Labidesthes siculus</i>	Yes	Yes
Brindled madtom	<i>Noturus miurus</i>	No	Yes	Bullhead minnow	<i>Pimephales vigilax</i>	Yes	Yes
Central stoneroller	<i>Campostoma anomalum</i>	No	Yes	Channel catfish	<i>Ictalurus punctatus</i>	Yes	Yes
Creek chub	<i>Semotilus atromaculatus</i>	No	Yes	Chestnut lamprey	<i>Ichthyomyzon castaneus</i>	Yes	Yes
Freckled madtom	<i>Noturus nocturnus</i>	No	Yes	Common carp	<i>Cyprinus carpio</i>	Yes	Yes
Gravel chub	<i>Erimystax x-punctatus</i>	No	Yes	Dusky darter	<i>Percina sciera</i>	Yes	Yes
Green sunfish	<i>Lepomis cyanellus</i>	No	Yes	Eastern sand darter	<i>Ammocrypta pellucida</i>	Yes	Yes
Greenside darter	<i>Etheostoma blennioides</i>	No	Yes	Emerald shiner	<i>Notropis atherinoides</i>	Yes	Yes
Hybrid sunfish	<i>Lepomis</i> sp. x <i>Lepomis</i> sp.	No	Yes	Flathead catfish	<i>Pylodictis olivaris</i>	Yes	Yes
Mottled sculpin	<i>Cottus bairdi</i>	No	Yes	Freshwater drum	<i>Aplodinotus grunniens</i>	Yes	Yes
Mountain madtom	<i>Noturus eleutherus</i>	No	Yes	Ghost shiner	<i>Notropis buchanani</i>	Yes	Yes
Mud darter	<i>Etheostoma asprigene</i>	No	Yes	Gizzard shad	<i>Dorosoma cepedianum</i>	Yes	Yes
Northern studfish	<i>Fundulus catenatus</i>	No	Yes	Golden redhorse	<i>Moxostoma erythrurum</i>	Yes	Yes
Orangethroat darter	<i>Etheostoma spectabile</i>	No	Yes	Grass pickerel	<i>Esox americanus</i>	Yes	Yes
Pugnose minnow	<i>Opsopoeodus emiliae</i>	No	Yes	Harlequin darter	<i>Etheostoma histrio</i>	Yes	Yes
Rainbow darter	<i>Etheostoma caeruleum</i>	No	Yes	Highfin carpsucker	<i>Carpiodes velifer</i>	Yes	Yes
Rosyface shiner	<i>Notropis rubellus</i>	No	Yes	Johnny darter	<i>Etheostoma nigrum</i>	Yes	Yes
Silver shiner	<i>Notropis photogenis</i>	No	Yes	Largemouth bass	<i>Micropterus salmoides</i>	Yes	Yes
Spotted sucker	<i>Minytrema melanops</i>	No	Yes	Logperch	<i>Percina caprodes</i>	Yes	Yes
Streamline chub	<i>Erimystax dissimilis</i>	No	Yes	Longear sunfish	<i>Lepomis megalotis</i>	Yes	Yes
Striped shiner	<i>Luxilus chrysocephalus</i>	No	Yes	Longnose gar	<i>Lepisosteus osseus</i>	Yes	Yes
Suckermouth minnow	<i>Phenacobius mirabilis</i>	No	Yes	Mimic shiner	<i>Notropis volucellus</i>	Yes	Yes
Goldeye	<i>Hiodon alosoides</i>	Yes	No	MS silvery minnow	<i>Hybognathus nuchalis</i>	Yes	Yes
Grass carp	<i>Ctenopharyngodon idella</i>	Yes	No	Northern hog sucker	<i>Hypentelium nigricans</i>	Yes	Yes
Mooneye	<i>Hiodon tergisus</i>	Yes	No	Quillback	<i>Carpiodes cyprinus</i>	Yes	Yes
Orangespotted sunfish	<i>Lepomis humilis</i>	Yes	No	Redear sunfish	<i>Lepomis microlophus</i>	Yes	Yes
Shovelnose sturgeon	<i>Scaphirhynchus platyrhynchus</i>	Yes	No	River carpsucker	<i>Carpiodes carpio</i>	Yes	Yes
Silver lamprey	<i>Ichthyomyzon unicuspis</i>	Yes	No	River redhorse	<i>Moxostoma carinatum</i>	Yes	Yes
Silverband shiner	<i>Notropis shumardi</i>	Yes	No	Sand shiner	<i>Notropis stramineus</i>	Yes	Yes
Skipjack herring	<i>Alosa chrysochloris</i>	Yes	No	Sauger	<i>Sander canadense</i>	Yes	Yes
Spotted darter	<i>Etheostoma maculatum</i>	Yes	No	Shorthead redhorse	<i>Moxostoma macrolepidotum</i>	Yes	Yes
Spotted gar	<i>Lepisosteus oculatus</i>	Yes	No	Shortnose gar	<i>Lepisosteus platostomus</i>	Yes	Yes
Walleye	<i>Sander vitreum</i>	Yes	No	Silver redhorse	<i>Moxostoma anisurum</i>	Yes	Yes
Warmouth	<i>Lepomis gulosus</i>	Yes	No	Silverjaw minnow	<i>Notropis buccatus</i>	Yes	Yes
White bass	<i>Morone chrysops</i>	Yes	No	Slenderhead darter	<i>Percina phoxocephala</i>	Yes	Yes
Bigmouth buffalo	<i>Ictiobus cyprinellus</i>	Yes	Yes	Smallmouth bass	<i>Micropterus dolomieu</i>	Yes	Yes
Black buffalo	<i>Ictiobus niger</i>	Yes	Yes	Smallmouth buffalo	<i>Ictiobus bubalus</i>	Yes	Yes
Black crappie	<i>Pomoxis nigromaculatus</i>	Yes	Yes	Speckled chub	<i>Macrhybopsis aestivalis</i>	Yes	Yes
Black redhorse	<i>Moxostoma duquesnei</i>	Yes	Yes	Spotfin shiner	<i>Cyprinella spiloptera</i>	Yes	Yes
Blackstripe topminnow	<i>Fundulus notatus</i>	Yes	Yes	Spotted bass	<i>Micropterus punctulatus</i>	Yes	Yes
Blue sucker	<i>Cycleptus elongatus</i>	Yes	Yes	Steelcolor shiner	<i>Cyprinella whipplei</i>	Yes	Yes
Bluegill	<i>Lepomis macrochirus</i>	Yes	Yes	Western mosquitofish	<i>Gambusia affinis</i>	Yes	Yes
Bluntnose minnow	<i>Pimephales notatus</i>	Yes	Yes	White crappie	<i>Pomoxis annularis</i>	Yes	Yes

APPENDIX E

STREAM HABITAT EVALUATION FORMS FOR ALL SITES

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: EFWR RIVER MILE: 1.00
 NEAREST TOWN: Petersburg COUNTY: Daviess/Pike
 QUADRANGLE: Sandy Hook TWP: 1N RNG: 7W SEC: 6
 LATITUDE: upstream 38° 32.59 N, 87° 13.87 W LONGITUDE: middle 38° 32.39 N, 87° 13.47 W
 LATITUDE: downstream 38° 32.59 N, 87° 13.87 W LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5,725
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Yes IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Station started at SR 57 bridge and went downstream
3,070 ft.

COLLECTION SUMMARY

DATE: 9/24/2003 GEAR: Boat EF / Seine EFFORT: 1hr /2 hauls
 CREW: Carnahan, Stefavanage, Kowalik
 OTHER GEAR/EFFORT: _____ WATER STAGE: Normal
 CANOPY (%OPEN): 98 PHOTOS (Y/N): No SECCHI DISK (inches): 22
 AIR TEMP (F): 65.3 WATER TEMP (F): 67.1 D.O. (ppm): 10.8
 CONDUCTIVITY: 552 µS pH: 8.5 ALKALINITY: 171 ppm
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 363 ft AVG. DEPTH: 73.2 in MAX DEPTH: 156.0 in
 STATION LENGTH: (1st date) 3,070 ft (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
383.9	4.7	5.1	4.1
357.6	5.5	6.9	6.0
292	6.1	8.0	9.0
383.9	7.3	6.0	4.4
393.7	3.6	2.5	13.0
370.7	6.7	8.0	4.0

<div style="border: 1px solid black; padding: 2px 10px;">6</div>	<div style="border: 1px solid black; padding: 2px 10px;">4</div>
SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: Launched boat at Petersburg site.
Ramp in good condition.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: EFWR RIVER MILE: 17.11
 NEAREST TOWN: Waco COUNTY: Daviess/Dubois
 QUADRANGLE: Glendale TWP: 1N RNG: 6W SEC: 13,14
 LATITUDE: upstream 38° 30.73 N, 87° 02.33 W LONGITUDE: middle 38° 30.67 N, 87° 02.62 W
 LATITUDE: downstream 38° 30.48 N, 87° 03.04 W LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5,619
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Yes IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Flatrock ramp downstream 3,861 ft.

COLLECTION SUMMARY

DATE: 9/22/2003 GEAR: Boat EF/Seine hauls EFFORT: 1 hr/4 hauls
 CREW: Carnahan, Abrel, Kowalik
 OTHER GEAR/EFFORT: _____ WATER STAGE: Little high
 CANOPY (%OPEN): 99% PHOTOS (Y/N): No SECCHI DISK (inches): 15
 AIR TEMP (F): 71.2 WATER TEMP (F): 68.9 D.O. (ppm): 8.46
 CONDUCTIVITY: 576 µS pH: 8.5 ALKALINITY: 171 ppm
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 307 ft AVG. DEPTH: 69.6 in MAX DEPTH: 120 in
 STATION LENGTH: (1st date) 3861 ft (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
305.1	9.0	5.0	4.5
337.9	5.0	3.5	2.1
328.1	3.8	3.4	6.0
308.4	5.8	8.1	10.0
295.3	8.0	6.8	8.5
272.3	8.0	6.7	1.4

<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">5</div> <p>SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">5</div> <p>AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: Ramp in good condition.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: EFWR RIVER MILE: 26.14
 NEAREST TOWN: Haysville COUNTY: Martin/Dubois
 QUADRANGLE: Jasper TWP: 1N RNG: 5W SEC: 24,25
 LATITUDE: upstream 38° 29.76 N, 86° 54.82 W LONGITUDE: middle 38° 29.89 N, 86° 55.25W
 LATITUDE: downstream 38° 29.77 N, 86° 55.36 W LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5,581
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Yes IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Started at 231 Bridge - sampled downstream 5,082 feet

COLLECTION SUMMARY

DATE: 9/23/2003 GEAR: Boat EF / Seine EFFORT: 1Hr EF / 4 Hauls
 CREW: Carnahan, Kowalik, Stefanavage
 OTHER GEAR/EFFORT: _____ WATER STAGE: Normal
 CANOPY (%OPEN): 99 PHOTOS (Y/N): N SECCHI DISK (inches): 20
 AIR TEMP (F): 62.6 WATER TEMP (F): 69.1 D.O. (ppm): 9.1
 CONDUCTIVITY: 552 µS pH: 8.5 ALKALINITY: 171 ppm
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 286 ft AVG. DEPTH: 102 in MAX DEPTH: 159.6 in
 STATION LENGTH: (1st date) 5,082 ft (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
278.9	6.0	5.6	4.7
255.9	3.1	4.1	7.2
288.7	4.0	2.5	3.5
298.6	1.9	4.2	4.9
288.7	4.4	3.4	3.2
308.4	9.5	10.8	13.3

<div style="border: 1px solid black; padding: 2px 10px;">5</div>	<div style="border: 1px solid black; padding: 2px 10px;">5</div>
SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: Launched boat at Portersville ramp.

Ramp in good condition.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: EFWR, Downstream Hindostan Falls RIVER MILE: 40.88
 NEAREST TOWN: Loogootee COUNTY: Martin
 QUADRANGLE: Rusk TWP: 2N RNG: 4W SEC: 10
 LATITUDE: upstream 38° 37.42 N, 86° 51.01 W LONGITUDE: middle 38° 37.28 N, 86° 50.69 W
 LATITUDE: downstream 38° 37.08 N, 86° 50.63 W LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5,124
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Yes IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Hindostan falls downstream to end of station around bend

COLLECTION SUMMARY

DATE: 9/17/2003 GEAR: EF Boat/Seine EFFORT: 1 hr/4 hauls
 CREW: Carnahan, Stefanavage, Kowalik
 OTHER GEAR/EFFORT: None WATER STAGE: Normal
 CANOPY (%OPEN): 98% PHOTOS (Y/N): No SECCHI DISK (inches): 18
 AIR TEMP (F): 64.4 WATER TEMP (F): 71.6 D.O. (ppm): 8.8
 CONDUCTIVITY: 566 µS pH: 8.3 ALKALINITY: 171 ppm
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 277 ft AVG. DEPTH: 64.8 in MAX DEPTH: 139.2 in
 STATION LENGTH: (1st date) 5,019 ft (2nd date) _____

WIDTH (ft)		DEPTH (ft)	
223.1	4.2	11.3	2.2
255.9	7.6	11.6	9.0
285.4	8.6	5.8	2.0
321.5	6.8	3.4	1.0
419.9	3.3	3.0	1.0
160.8	5.7	5.7	5.7

<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">8</div> <p align="center">SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">10</div> <p align="center">AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: Launched at Hindostan Falls downstream boat ramp.
Ramp in good condition.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: EFWR RIVER MILE: 42.07
 NEAREST TOWN: Loogootee COUNTY: Martin
 QUADRANGLE: Rusk TWP: 2N RNG: 4W SEC: 9
 LATITUDE: upstream 38° 37.21 N, 86° 52.04W LONGITUDE: middle 38° 37.32 N, 86° 51.84 W
 LATITUDE: downstream 38° 37.39 N, 86° 51.38 W LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5,118
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Yes IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Upstream of Hindostan Falls. Station started right upstream of Poplar Creek and ended upstream of Hindostan Falls boat ramp

COLLECTION SUMMARY

DATE: 9/16/2003 GEAR: Boat EF / Seine (50') EFFORT: 1 HR EF / 4 Hauls
 CREW: Carnahan, Stefanavage, Kowalik

OTHER GEAR/EFFORT: None WATER STAGE: Normal
 CANOPY (%OPEN): 98 PHOTOS (Y/N): N SECCHI DISK (inches): 18 in
 AIR TEMP (F): 64.4 WATER TEMP (F): 71.6 D.O. (ppm): 8.8
 CONDUCTIVITY: 566 µS pH: 8.3 ALKALINITY: 171 ppm
 TDS: _____

STREAM MEASUREMENTS AVG. WIDTH: 298 ft AVG. DEPTH: 99.6 in MAX DEPTH: 122.4 in
 STATION LENGTH: (1st date) 4,064 ft (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
334.6	6.4	7.1	7.7
344.5	7.6	6.7	7.8
298.6	8.9	8.4	8.4
285.4	10.2	9.4	8.2
269.0	9.4	9.6	8.7
262.5	9.0	8.7	8.7

<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">6</div> <p>SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">6</div> <p>AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: Launched at upstream Hindostan Falls boat ramp.
Ramp in good condition.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 54.7
 NEAREST TOWN: Shoals COUNTY: Martin
 QUADRANGLE: Shoals TWP: T3N RNG: R4W SEC: 25
 LATITUDE: 38° 39' 32.64" N LONGITUDE: 86° 48' 16.56" W
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: Shoals AVG. DISCHARGE (cfs): 5001
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Mouth of Beaver Creek and downstream.

COLLECTION SUMMARY

DATE: 9/17/2003 GEAR: DC Electrofishing EFFORT: 1 hour
 CREW: Schoenung, Berger, Ort
 OTHER GEAR/EFFORT: Seine, 4 hauls WATER STAGE: Normal
 CANOPY (%OPEN): 90 PHOTOS (Y/N): Y SECCHI DISK (inches): 14
 AIR TEMP (F): 76° WATER TEMP (F): 74° D.O. (ppm): 8.2
 CONDUCTIVITY: 540 µS pH: 8.3 ALKALINITY: 119.7
 TDS: 270 mg/L
 STREAM MEASUREMENTS AVG. WIDTH: 258 ft. AVG. DEPTH: 76.3 inches MAX DEPTH: 120 inches
 STATION LENGTH: (1st date) _____ (2nd date) _____

WIDTH (ft)	DEPTH (in)		
228	80	95	40
261	65	55	40
276	80	50	50
246	100	95	80
279	120	95	100

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SUBJECTIVE	AESTHETIC
RATING	RATING
(1-10)	(1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: _____

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 75.08
 NEAREST TOWN: Williams COUNTY: Lawrence
 QUADRANGLE: Williams TWP: T4N RNG: R2W SEC: 18
 LATITUDE: 38° 46' 30.4" N LONGITUDE: 86° 40' 19.8" W
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: Bedford AVG. DISCHARGE (cfs): 4,720
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Riffle at bend in river approximately 3.5 miles downstream from Williams Dam, downstream from that point.

COLLECTION SUMMARY

DATE: 9/25/2003 GEAR: DC Electrofishing EFFORT: 1 hour
 CREW: Schoenung, Fisher, Briggs
 OTHER GEAR/EFFORT: Seine, 4 hauls WATER STAGE: Normal
 CANOPY (%OPEN): 90 PHOTOS (Y/N): Y SECCHI DISK (inches): 15
 AIR TEMP (F): 68° WATER TEMP (F): 69° D.O. (ppm): 8.9
 CONDUCTIVITY: 600 µS pH: 8.3 ALKALINITY: 119.7
 TDS: 300 mg/L
 STREAM MEASUREMENTS AVG. WIDTH: 234 ft AVG. DEPTH: 90.1 inches MAX DEPTH: 132 inches
 STATION LENGTH: (1st date) 4,197 feet (2nd date) _____

WIDTH (ft)		DEPTH (in)	
234	130	132	43
234	117	110	50
195	75	80	55
261	130	115	70
246	75	90	80

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SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: _____

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 85.1
 NEAREST TOWN: Williams COUNTY: Lawrence
 QUADRANGLE: Bedford West TWP: T4N RNG: R2W SEC: 1, 12
 LATITUDE: 38° 47' 57.6" N LONGITUDE: 86° 35' 03.8" W
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: Bedford AVG. DISCHARGE (cfs): 4,047
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Started 500 feet above Stumphole Bridge and sampled 4,400 feet downstream. Area is impounded behind Williams Dam.

COLLECTION SUMMARY

DATE: 9/15/2003 GEAR: DC Electrofishing EFFORT: 1 hour
 CREW: Schoenung, Fisher, Briggs
 OTHER GEAR/EFFORT: Seine, 4 hauls WATER STAGE: Normal
 CANOPY (%OPEN): 95 PHOTOS (Y/N): Y SECCHI DISK (inches): 14
 AIR TEMP (F): 77° WATER TEMP (F): 70° D.O. (ppm): 9.18
 CONDUCTIVITY: 560 µS pH: 8.3 ALKALINITY: _____
 TDS: 280 mg/L
 STREAM MEASUREMENTS AVG. WIDTH: 327.6 ft AVG. DEPTH: 164 inches MAX DEPTH: 204 inches
 STATION LENGTH: (1st date) 4,470 feet (2nd date) _____

WIDTH (ft)		DEPTH (in)	
330	156	168	144
348	168	180	168
357	156	144	144
345	144	168	192
258	144	204	180

<div style="border: 1px solid black; padding: 2px 10px;">5</div>	<div style="border: 1px solid black; padding: 2px 10px;">4</div>
SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: Numerous field tile outlet pipes present.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 94.3
 NEAREST TOWN: Bedford COUNTY: Lawrence
 QUADRANGLE: Bedford West TWP: T5N RNG: R1W SEC: 34
 LATITUDE: 38° 49' 34.5" N LONGITUDE: 86° 30' 48.0" W
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: Bedford AVG. DISCHARGE (cfs): 4,047
 IS REACH REPRESENTATIVE OF STREAM (Y/N) N IF NOT, WHY? Bridge abutments and riprap present.

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Started at Leatherwood Creek and sampled downstream past S.R. 37 bridge.

COLLECTION SUMMARY

DATE: 9/24/2003 GEAR: DC Electrofishing EFFORT: 1 hour
 CREW: Schoenung, Fisher, Briggs
 OTHER GEAR/EFFORT: Seine, four hauls WATER STAGE: Normal
 CANOPY (%OPEN): 90 PHOTOS (Y/N): Y SECCHI DISK (inches): 30
 AIR TEMP (F): 77° WATER TEMP (F): 66° D.O. (ppm): 7.8
 CONDUCTIVITY: 600 µS pH: 8 ALKALINITY: 153.9
 TDS: 300 mg/L
 STREAM MEASUREMENTS AVG. WIDTH: 302.4 ft AVG. DEPTH: 69.5 inches MAX DEPTH: 99 inches
 STATION LENGTH: (1st date) 3,870 feet (2nd date) _____

WIDTH (ft)		DEPTH (in)	
342	55	61	43
288	45	72	74
309	75	52	80
312	67	77	85
261	69	89	99

<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">5</div> <p align="center">SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">6</div> <p align="center">AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: _____

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 106.4
 NEAREST TOWN: Lawrenceport COUNTY: Lawrence
 QUADRANGLE: Bedford East TWP: T4N RNG: R1E SEC: 27
 LATITUDE: 38° 45' 13.7" N LONGITUDE: 86° 23' 07.1" W
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: T4N, R1E, S21 AVG. DISCHARGE (cfs): 3,861
 IS REACH REPRESENTATIVE OF STREAM (Y/N) N IF NOT, WHY? Washed out dam and island present

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Downstream of Fishing Creek, washed out dam about center of the station. Shocked both sides of river.

COLLECTION SUMMARY

DATE: 9/24/2003 GEAR: DC Electrofishing EFFORT: 1 hour
 CREW: Schoenung, Fisher, Briggs
 OTHER GEAR/EFFORT: Seine, 4 hauls WATER STAGE: Normal
 CANOPY (%OPEN): 99 PHOTOS (Y/N): Y SECCHI DISK (inches): 24
 AIR TEMP (F): 77° WATER TEMP (F): 68° D.O. (ppm): 7.4
 CONDUCTIVITY: 560 µS pH: 8.2 ALKALINITY: 153.9
 TDS: 290 mg/L
 STREAM MEASUREMENTS AVG. WIDTH: 236.4 ft AVG. DEPTH: 63.5 inches MAX DEPTH: 95 inches
 STATION LENGTH: (1st date) 4,782 feet (2nd date) _____

WIDTH (ft)	DEPTH (in)		
300	48	55	55
210	72	80	45
258	45	75	95
198	40	60	90
216	47	95	50

<div style="border: 1px solid black; padding: 2px 10px;">6</div>	<div style="border: 1px solid black; padding: 2px 10px;">5</div>
SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: _____

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 119.6
 NEAREST TOWN: Fort Ritner COUNTY: Jackson, Washington
 QUADRANGLE: Tunnelton TWP: 4N RNG: 2E SEC: 23
 LATITUDE: N38 45.465 LONGITUDE: W86 17.048
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): _____
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____


DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Access off of bank at mouth of oxbow by bridge at Fort Ritner. Began at oxbow mouth and sampled downstream 2,218 feet along both banks.

COLLECTION SUMMARY

DATE: 9/17/2003 GEAR: D.C. boat EFFORT: 3,600 seconds
 CREW: Keller, Wisener, Smyth
 OTHER GEAR/EFFORT: 4 seine hauls WATER STAGE: slightly high
 CANOPY (%OPEN): 95% PHOTOS (Y/N): N SECCHI DISK (inches): 22 inches
 AIR TEMP (F): 78 WATER TEMP (F): 67.4 D.O. (ppm): meter not working
 CONDUCTIVITY: 560 pH: 8 ALKALINITY: 119.7
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 230 ft. AVG. DEPTH: 4.4 ft. MAX DEPTH: 10.3 ft.
 STATION LENGTH: (1st date) 2,218 ft. (2nd date) _____

WIDTH (ft)	DEPTH (in)		
218	3.3	3.8	7
225	3.9	3.5	6.9
235	1.4	3.8	6
216	3.7	4	4.6
256	7.6	5	1.6


 SUBJECTIVE
 RATING
 (1-10)


 AESTHETIC
 RATING
 (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: _____

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 129.7
 NEAREST TOWN: Millport COUNTY: Jackson, Washington
 QUADRANGLE: Medora TWP: 4N RNG: 3E SEC: 22
 LATITUDE: N38 46.346 LONGITUDE: W86 10.185
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 3,717
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched at DNR ramp at mouth of Muscatatuck River.
Began at ramp and sampled both banks 2,587 feet in a downstream direction.

COLLECTION SUMMARY

DATE: 9/16/2003 GEAR: D.C. boat EFFORT: 3,600 seconds
 CREW: Keller, Wisener, Smyth
 OTHER GEAR/EFFORT: 2 seine hauls WATER STAGE: slightly high
 CANOPY (%OPEN): 95% PHOTOS (Y/N): N SECCHI DISK (inches): 12 inches
 AIR TEMP (F): 80 WATER TEMP (F): 72.1 D.O. (ppm): 4.1
 CONDUCTIVITY: 320 μ S pH: 7.5 ALKALINITY: 85.5
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 192 ft. AVG. DEPTH: 5.2 ft. MAX DEPTH: 12.6 ft.
 STATION LENGTH: (1st date) 2,587 ft. (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
209	4.2	4.8	5.2
185	3.6	4.5	8.3
177	4	5	3.1
183	3.2	7	9.5
204	3.6	4.8	7.7



 SUBJECTIVE AESTHETIC
 RATING RATING
 (1-10) (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: Seine hauls done on one and only sand bar. No other shallows suitable for seine.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**


STREAM: East Fork White River RIVER MILE: 136.9
 NEAREST TOWN: Medora COUNTY: Jackson
 QUADRANGLE: Medora TWP: 4N, 5N RNG: 3E SEC: 1,2,36
 LATITUDE: N38 48.863 LONGITUDE: W86 08.832
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,560
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Access at DNR boat ramp at Medora. Began at St. Rd. 235 bridge and sampled downstream along both banks 2,270 feet.

COLLECTION SUMMARY

DATE: 9/16/2003 GEAR: D.C. boat EFFORT: 3,600 seconds
 CREW: Keller, Wisener, Smyth
 OTHER GEAR/EFFORT: 3 seine hauls WATER STAGE: slightly high
 CANOPY (%OPEN): 95% PHOTOS (Y/N): N SECCHI DISK (inches): 22 inches
 AIR TEMP (F): 77 WATER TEMP (F): 69.8 D.O. (ppm): 9.7
 CONDUCTIVITY: 550 μ S pH: 8.5 ALKALINITY: 119.7
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 167 ft. AVG. DEPTH: 5.9 ft. MAX DEPTH: 15.0 ft.
 STATION LENGTH: (1st date) 2,270 ft. (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
175	2.2	4.8	7.5
113	4	9.9	15
117	4.2	8.7	14.4
247	2.1	2	2.6
184	1.6	5.9	3.9



 SUBJECTIVE AESTHETIC
 RATING RATING
 (1-10) (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: Seine locations not very good.
Observed a couple of freshwater drum but not captured.

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**



STREAM: East Fork White River RIVER MILE: 146.2
 NEAREST TOWN: Brownstown COUNTY: Jackson
 QUADRANGLE: Brownstown TWP: 5N RNG: 4E SEC: 16
 LATITUDE: N38 52.467 LONGITUDE: W86 05.062
 LATITUDE: _____ LONGITUDE: _____
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,516
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Access at Brownstown Public Fishing Area. Began at Hwy 50 bridge. Sampled downstream 2,746 ft. along both banks.

COLLECTION SUMMARY

DATE: 9/15/2003 GEAR: D.C. boat EFFORT: 3,600 sec.
 CREW: Keller, Wisener, Smyth
 OTHER GEAR/EFFORT: 4 seine hauls WATER STAGE: slightly high
 CANOPY (%OPEN): 95% PHOTOS (Y/N): N SECCHI DISK (inches): 30 inches
 AIR TEMP (F): 75 WATER TEMP (F): 70.1 D.O. (ppm): 12
 CONDUCTIVITY: 560 µS pH: 9.5 ALKALINITY: 85.5
 TDS: _____
 STREAM MEASUREMENTS AVG. WIDTH: 198 ft. AVG. DEPTH: 4.0 ft. MAX DEPTH: 6.9 ft.
 STATION LENGTH: (1st date) 2,746 (2nd date) _____

WIDTH (ft)	DEPTH (ft)		
206	6.8	4.6	6.4
171	5.4	3.8	1.3
200	1.8	2.4	4
266	2.2	2.7	0.9
147	5.6	6	5.4



 SUBJECTIVE AESTHETIC
 RATING RATING
 (1-10) (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: lesions on 4 redhorse and 2 carpsuckers

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 154.5
 NEAREST TOWN: Brownstown COUNTY: Jackson
 QUADRANGLE: Seymour TWP: 6N RNG: 5E SEC: 32
 LATITUDE:* 38° 55.300' (GPS units = WGS-84) LONGITUDE: 85° 59.303' (GPS units = WGS-84)
 LATITUDE:** 38° 55.161' (GPS units = WGS-84) LONGITUDE: 85° 59.503' (GPS units = WGS-84)
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,367
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched from private ramp in New Elizabethtown.

Sample site extended downstream approximately 750 feet from ramp and approximately 1,125 feet upstream from ramp. Left and right banks were sampled in downstream direction.

COLLECTION SUMMARY

DATE: 9/24/2003 GEAR: 16-foot DC shocker boat EFFORT: 3,600 seconds
 CREW: L. Lehman, J. Ferguson II, D. King
 OTHER GEAR/EFFORT: 4 hauls with 6' x 50' seine (1/8" Delta mesh) WATER STAGE: _____
 CANOPY (%OPEN): 95 PHOTOS (Y/N): Y SECCHI DISK (inches): 56
 AIR TEMP (F): 63 WATER TEMP (F): 64 D.O. (ppm): 8.75
 CONDUCTIVITY: 450 µS pH: 8.0 ALKALINITY: 239 ppm
 TDS: _____ (conductivity) (0.84 correlation factor) = 378 ppm
 STREAM MEASUREMENTS AVG. WIDTH: 199 feet AVG. DEPTH: 53 inches MAX DEPTH: 11 feet
 STATION LENGTH: (1st date) 1,875 feet (2nd date) NA

WIDTH (ft)		DEPTH (in)	
170	37	60	88
213	50	44	25
226	48	91	98
185	42	56	70
200	24	31	37

<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">6</div> <p>SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">4</div> <p>AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: *Top of station. **Bottom of station.

Latitude and longitude near center of station = 38° 55.165' and 85° 59.309' (GPS units = WGS-84)

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 162.2
 NEAREST TOWN: Seymour COUNTY: Jackson
 QUADRANGLE: Seymour TWP: 6N RNG: 5E SEC: 11
 LATITUDE:* 38° 58.466' (GPS units = WGS-84) LONGITUDE: 85° 55.788' (GPS units = WGS-84)
 LATITUDE:** 38° 57.982' (GPS units = WGS-84) LONGITUDE: 85° 53.609' (GPS units = WGS-84)
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,341
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched from DNR ramp at Bell Ford. Top of station started at old railroad bridge pier and extended downstream approximately 3,106 feet. Both banks were sampled in downstream direction.

COLLECTION SUMMARY

DATE: 9/23/2003 GEAR: 16-foot DC shocker boat EFFORT: 3,600 seconds
 CREW: L. Lehman, J. Ferguson II, D. King
 OTHER GEAR/EFFORT: 4 hauls with 6' x 50' seine (1/8" Delta mesh) WATER STAGE: _____
 CANOPY (%OPEN): 95 PHOTOS (Y/N): Y SECCHI DISK (inches): 53
 AIR TEMP (F): 59 WATER TEMP (F): 65 D.O. (ppm): 8.62
 CONDUCTIVITY: 470 µS pH: 8.0 ALKALINITY: 239 ppm
 TDS: _____ (conductivity) (0.84 correlation factor) = 395 ppm
 STREAM MEASUREMENTS AVG. WIDTH: 185 feet AVG. DEPTH: 80 inches MAX DEPTH: 16 feet
 STATION LENGTH: (1st date) 3,106 feet (2nd date) NA

WIDTH (ft)		DEPTH (in)	
213	144	168	78
209	98	48	48
177	132	58	34
176	50	70	94
150	38	56	84

1

<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">7</div> <p align="center">SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">6</div> <p align="center">AESTHETIC RATING (1-10)</p>
--	---

ADDITIONAL COMMENTS/POLLUTION IMPACTS: River has cut a new channel on the left bank, just above top of this station, since the last DFW survey here in 1993 (this is how oxbows are formed). *Top of station. **Bottom of station. Latitude and longitude near center of station = 38° 58.207' and 85° 55.690' (GPS units = WGS-84)

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 166.6

NEAREST TOWN: Rockford COUNTY: Jackson

QUADRANGLE: Seymour TWP: 6N, 7N RNG: 6E SEC: 6, 31

LATITUDE:* 38° 59.951' (GPS units = WGS-84) LONGITUDE: 85° 53.496' (GPS units = WGS-84)

LATITUDE:** 38° 59.611' (GPS units = WGS-84) LONGITUDE: 85° 53.703' (GPS units = WGS-84)

U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,339

IS REACH REPRESENTATIVE OF STREAM (Y/N) N IF NOT, WHY? A low-head dam 3,000 feet below bottom of station may be slowing the flow in this sample site. A fish ladder, which appears to be functional, is present at dam.

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched from DNR ramp at Rockford. Top of station started at State Road 11 and extended approximately 2,486 feet downstream. Both banks were sampled in downstream direction.

COLLECTION SUMMARY

DATE: 9/18/2003 GEAR: 16-foot DC shocker boat EFFORT: 3,649 seconds

CREW: L. Lehman, J. Ferguson II, D. King

OTHER GEAR/EFFORT: 3.5 hauls with 6' x 50' seine (1/8" Delta mesh) WATER STAGE: _____

CANOPY (%OPEN): 95 PHOTOS (Y/N): Y SECCHI DISK (inches): 44

AIR TEMP (F): 80 WATER TEMP (F): 67 D.O. (ppm): 8.27

CONDUCTIVITY: 480 µS pH: 8.3 ALKALINITY: 274 ppm

TDS: _____ (conductivity) (0.84 correlation factor) = 403 ppm

STREAM MEASUREMENTS AVG. WIDTH: 280 feet AVG. DEPTH: 111 inches MAX DEPTH: 23 feet

STATION LENGTH: (1st date) 2,486 feet (2nd date) NA

WIDTH (ft)		DEPTH (in)	
298	144	120	36
263	110	72	60
212	228	216	228
295	108	96	42
330	43	62	96

<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">4</div> <p align="center">SUBJECTIVE RATING (1-10)</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">3</div> <p align="center">AESTHETIC RATING (1-10)</p>
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ADDITIONAL COMMENTS/POLLUTION IMPACTS: Approximately 1/3 of right bank is eroding away due to farming at river's edge and absence of any riparian vegetation. *Top of station. **Bottom of station.

Latitude and longitude near center of station = 38° 59.862' and 85° 53.743' (GPS units = WGS-84)

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 177.6
 NEAREST TOWN: Azalia COUNTY: Bartholomew
 QUADRANGLE: Azalia TWP: 7N RNG: 6E SEC: 4
 LATITUDE:* 39° 05.100' (GPS units = WGS-84) LONGITUDE: 85° 51.602' (GPS units = WGS-84)
 LATITUDE:** 39° 04.729' (GPS units = WGS-84) LONGITUDE: 85° 51.610' (GPS units = WGS-84)
 U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 2,053
 IS REACH REPRESENTATIVE OF STREAM (Y/N) Y IF NOT, WHY? _____

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched from DNR ramp at Azalia bridge. Top of station started at bridge on County Road 800 South and extended approximately 2,326 feet downstream. Both banks were sampled in downstream direction.

COLLECTION SUMMARY

DATE: 9/17/2003 GEAR: 16-foot DC shocker boat EFFORT: 3,642 seconds
 CREW: L. Lehman, J. Ferguson II, D. King
 OTHER GEAR/EFFORT: 2 hauls with 6' x 50' seine (1/8" Delta mesh) WATER STAGE: _____
 CANOPY (%OPEN): 85 PHOTOS (Y/N): Y SECCHI DISK (inches): 58
 AIR TEMP (F): 69 WATER TEMP (F): 67 D.O. (ppm): 8.21
 CONDUCTIVITY: 480 µS pH: 8.3 ALKALINITY: 274 ppm
 TDS: _____ (conductivity) (0.84 correlation factor) = 403 ppm
 STREAM MEASUREMENTS AVG. WIDTH: 210 feet AVG. DEPTH: 56 inches MAX DEPTH: 11 feet
 STATION LENGTH: (1st date) 2,326 feet (2nd date) NA

WIDTH (ft)	DEPTH (in)		
210	54	66	132
219	66	29	42
206	65	54	32
193	67	60	41
220	53	46	37

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SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: *Top of station. **Bottom of station.
Latitude and longitude near center of station = 39° 04.879' and 85° 51.645' (GPS units = WGS-84)

**INDIANA DIVISION OF FISH AND WILDLIFE
STREAM HABITAT EVALUATION FORM**

STREAM: East Fork White River RIVER MILE: 189.1

NEAREST TOWN: Columbus COUNTY: Bartholomew

QUADRANGLE: Columbus TWP: 9N RNG: 5E SEC: 25

LATITUDE:* 39° 11.831' (GPS units = WGS-84) LONGITUDE: 85° 55.385' (GPS units = WGS-84)

LATITUDE:** 39° 11.442' (GPS units = WGS-84) LONGITUDE: 85° 55.183' (GPS units = WGS-84)

U.S.G.S. GAUGING STATION LOCATION: _____ AVG. DISCHARGE (cfs): 1,708

IS REACH REPRESENTATIVE OF STREAM (Y/N) N IF NOT, WHY? A wastewater treatment plant discharge is present
on left bank approximately 300 feet below top of station. A lowhead dam is present approximately 1,000 feet above top of station.

DESCRIPTION OF SAMPLE SITE (Access, length, direction sampled): Launched at DNR ramp behind wastewater treatment
plant. Top of station started at ramp and extended approximately 2,726 feet downstream. Both banks were
sampled in downstream direction.

COLLECTION SUMMARY

DATE: 9/16/2003 GEAR: 16-foot DC shocker boat EFFORT: 3,634 seconds

CREW: L. Lehman, J. Ferguson II, D. King

OTHER GEAR/EFFORT: 3 hauls with 6' x 50' seine (1/8" Delta mesh) WATER STAGE: _____

CANOPY (%OPEN): 90 PHOTOS (Y/N): Y SECCHI DISK (inches): 59

AIR TEMP (F): 67 WATER TEMP (F): 66 D.O. (ppm): 8.49

CONDUCTIVITY: 400 µS pH: 8.3 ALKALINITY: 274 ppm

TDS: _____ (conductivity) (0.84 correlation factor) = 336 ppm

STREAM MEASUREMENTS AVG. WIDTH: 207 feet AVG. DEPTH: 48 inches MAX DEPTH: 12 feet

STATION LENGTH: (1st date) 2,726 feet (2nd date) NA

WIDTH (ft)	DEPTH (in)		
209	32	29	41
270	32	28	23
169	31	74	132
192	41	61	74
195	36	41	50

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SUBJECTIVE RATING (1-10)	AESTHETIC RATING (1-10)

ADDITIONAL COMMENTS/POLLUTION IMPACTS: *Top of station. **Bottom of station.

Latitude and longitude near center of station = 39° 11.632' and 85° 55.218' (GPS units = WGS-84)

APPENDIX F

QHEI FORMS FOR ALL SITES

STREAM: EFWR RIVER MILE 1.00 DATE: 9/24/2003 QHEI SCORE **53**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE **13**

TYPE	POOL	RIFFLE	POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/> BLDER(SLAB)(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> GRAVEL(7)	<input type="checkbox"/>	<input type="checkbox"/> LIMESTONE(1)	<input type="checkbox"/> RIP/RAP(0)	<input checked="" type="checkbox"/> SILT-HEAVY(-2)	<input type="checkbox"/> SILT-MOD(-1)
<input type="checkbox"/> BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> SAND(6)	<input type="checkbox"/>	<input checked="" type="checkbox"/> TILLS(1)	<input type="checkbox"/> HARDPAN(0)	<input type="checkbox"/> SILT-NORM(0)	<input type="checkbox"/> SILT-FREE(1)
<input checked="" type="checkbox"/> COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/> SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>		
<input type="checkbox"/> HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/> SHALE(-1)	<input checked="" type="checkbox"/> EXTENSIVE(-2)	<input type="checkbox"/> MODERATE(-1)	
<input checked="" type="checkbox"/> MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/> COAL FINES(-2)	<input type="checkbox"/> LOW(0)	<input type="checkbox"/> NONE(1)	

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☒ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE **11**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/> UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

12

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input checked="" type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE **7.1**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> WIDE >150ft.(4)
<input type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE 30-150 ft.(3)
<input type="checkbox"/>	<input type="checkbox"/> NARROW 15-30 ft.(2)
<input type="checkbox"/>	<input type="checkbox"/> VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	<input type="checkbox"/> NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input checked="" type="checkbox"/>	<input type="checkbox"/> SHURB OR OLD FIELD(2)
<input type="checkbox"/>	<input type="checkbox"/> RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)
<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/> HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE **0**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH

<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)
<input type="checkbox"/> GENERALLY 2-4 in.(1)
<input type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)
<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)
<input checked="" type="checkbox"/> NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> LOW(1)	

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 2.57 % POOL _____ % RIFFLE _____ % RUN 100 GRADIENT SCORE **10**

STREAM: EFWR RIVER MILE 17.11 DATE: 9/22/2003 QHEI SCORE 70

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 20

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)			
<input type="checkbox"/>	BLDER/SLAB(10)			<input checked="" type="checkbox"/>	GRAVEL(7)		<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)			<input checked="" type="checkbox"/>	SAND(6)		<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input checked="" type="checkbox"/>	COBBLE(8)		<input checked="" type="checkbox"/>		BEDROCK(5)			SANDSTONE(0)		Extent of Embeddedness (check one)		
<input type="checkbox"/>	HARDPAN(4)				DETRITUS(3)			SHALE(-1)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)
<input checked="" type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>			ARTIFIC(0)			COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 12

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/> UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 9

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE 4.5

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input checked="" type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input checked="" type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input checked="" type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input checked="" type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0.49 % POOL 10 % RIFFLE 10 % RUN 80 GRADIENT SCORE 6

STREAM: EFWR RIVER MILE 26.14 DATE: 9/23/2003 QHEI SCORE 69

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 20

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	GRAVEL(7)	<input type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input checked="" type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
<input checked="" type="checkbox"/>	MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS:

2) INSTREAM COVER: (20)

COVER SCORE 11

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)
<input type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)
			<input type="checkbox"/>	EXTENSIVE >75%(11)	
			<input checked="" type="checkbox"/>	MODERATE 25-75%(7)	
			<input type="checkbox"/>	SPARSE 5-25%(3)	
			<input type="checkbox"/>	NEARLY ABSENT <5%(1)	

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER			
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	NONE(6)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	RECOVERED(4)	<input checked="" type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	ISLAND
<input checked="" type="checkbox"/>	LOW(2)	<input type="checkbox"/>	RECOVERING(3)	<input type="checkbox"/>	LOW(1)	<input type="checkbox"/>	LEVEED
<input type="checkbox"/>	NONE(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)	<input type="checkbox"/>		<input type="checkbox"/>	BANK SHAPING
				<input type="checkbox"/>	ONE SIDE CHANNEL MODIFICATION		

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 4

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)
<input checked="" type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 8

<u>MAX. DEPTH (Check 1)</u>	<u>MORPHOLOGY (Check 1)</u>	<u>POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)</u>			
<input checked="" type="checkbox"/>	>4 ft.(6)	<input type="checkbox"/>	TORRENTIAL(-1)	<input type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>	2.4-4 ft.(4)	<input checked="" type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/>	1.2-2.4 ft.(2)	<input type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/>	<1.2 ft.(1)	<input type="checkbox"/>	SLOW(1)		
<input type="checkbox"/>	<0.6 ft.(Pool=0)(0)				

COMMENTS:

RIFFLE SCORE 7

RIFFLE/RUN DEPTH

<input checked="" type="checkbox"/>	GENERALLY >4 in. MAX.>20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX.<20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input type="checkbox"/>	GENERALLY <2 in.(Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input checked="" type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	NONE(2)
<input type="checkbox"/>	MODERATE(0)	<input type="checkbox"/>	NO RIFFLE(0)
<input checked="" type="checkbox"/>	LOW(1)		

COMMENTS:

6) GRADIENT (FEET/MILE)(10): 0.49 % POOL 15 % RIFFLE 15 % RUN 70 GRADIENT SCORE 6

STREAM: EFWR Hindostan Falls DS RIVER MILE 40.88 DATE: 9/17/2003 QHEI SCORE 82

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 13.75

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input checked="" type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 17

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/> UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input checked="" type="checkbox"/> EXTENSIVE >75%(11)
<input checked="" type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

16

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input checked="" type="checkbox"/> MODERATE(3)	<input checked="" type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 9.3

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	WIDE >150 ft.(4)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	FOREST, SWAMP(3)
<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)
<input checked="" type="checkbox"/>	RESID., PARK, NEW FIELD(1)
<input type="checkbox"/>	FENCED PASTURE(1)

L	R (per bank)
<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 9

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE 7

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input checked="" type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> LOW(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 1.74 % POOL 30 % RIFFLE 10 % Run 60 GRADIENT SCORE 10

STREAM: EFWR RIVER MILE 42.07 DATE: 9/16/2003 QHEI SCORE 41

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 3

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GRAVEL(7)	<input type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input checked="" type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
<input checked="" type="checkbox"/>	MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☒ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 10

TYPE (Check all that apply)				AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	SPARSE 5-25%(3)
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

11

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 8.5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY				BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)	L	R (per bank)
<input type="checkbox"/>	<input checked="" type="checkbox"/> WIDE >150 ft.(4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)	<input type="checkbox"/>	<input type="checkbox"/> NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 0

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input checked="" type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: No Pool - All Run

RIFFLE SCORE 0

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input checked="" type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0.77 % POOL _____ % RIFFLE _____ % RUN 100 GRADIENT SCORE 8

STREAM: East Fork White River RIVER MILE 54.7 DATE: 9/16/2003 QHEI SCORE **79**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE **19**

TYPE		POOL	RIFFLE	POOL		RIFFLE		SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input checked="" type="checkbox"/>	BLDER/SLAB(10)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>					
<input type="checkbox"/>	HARDPAN(4)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>		<input type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE **14**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)					
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
						<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input checked="" type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input checked="" type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE **8**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION			
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)		
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)	<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)	<input checked="" type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)	<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE **11**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE **6**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input checked="" type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input checked="" type="checkbox"/> MODERATE(0)	<input type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0.8 % POOL 30 % RIFFLE 20 % Run 50 GRADIENT SCORE **8**

STREAM: East Fork White River RIVER MILE 75.08 DATE: 9/25/2003 QHEI SCORE 80

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 20

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/>	BLDER/SLAB(10)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	BOULDER(9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	COBBLE(8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 13

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/> UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input type="checkbox"/> OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/> SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/> BOULDERS(1)	<input type="checkbox"/> SPARSE 5-25%(3)
	<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

15

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input checked="" type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 8

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)	<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	
<input type="checkbox"/>	NONE(0)				

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 12

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE 8

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input checked="" type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input checked="" type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0.5 % POOL 40 % RIFFLE 30 % Run 30 GRADIENT SCORE 6

STREAM: East Fork White River RIVER MILE 85.1 DATE: 9/15/2003 QHEI SCORE 48

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 3

TYPE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)							
<input type="checkbox"/>	BLDER/SLAB(10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GRAVEL(7)	<input type="checkbox"/>	LIMESTONE(1)	<input checked="" type="checkbox"/>	RIP/RAP(0)	<input checked="" type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input checked="" type="checkbox"/>	SHALE(-1)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
<input checked="" type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input checked="" type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 13

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)				
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
						<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

11

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER					
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	NONE(6)	<input checked="" type="checkbox"/>	HIGH(3)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	RECOVERED(4)	<input type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	RELOCATION	<input type="checkbox"/>	ISLAND
<input type="checkbox"/>	LOW(2)	<input type="checkbox"/>	RECOVERING(3)	<input type="checkbox"/>	LOW(1)	<input type="checkbox"/>	CANOPY REMOVAL	<input type="checkbox"/>	LEVEED
<input checked="" type="checkbox"/>	NONE(1)	<input checked="" type="checkbox"/>	POOR(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)	<input type="checkbox"/>	DREDGING	<input type="checkbox"/>	BANK SHAPING
						<input type="checkbox"/>	ONE SIDE CHANNEL MODIFICATION		

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 6

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input checked="" type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 9

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)			
<input checked="" type="checkbox"/>	>4 ft.(6)	<input type="checkbox"/>	TORRENTIAL(-1)	<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>	2-4 ft.(4)	<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/>	1.2-2.4 ft.(2)	<input type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/>	<1.2 ft.(1)	<input checked="" type="checkbox"/>	SLOW(1)		
<input type="checkbox"/>	<0.6 ft.(Pool=0)(0)				

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH

<input type="checkbox"/>	GENERALLY >4 in. MAX.>20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX.<20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input type="checkbox"/>	GENERALLY <2 in.(Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input type="checkbox"/>	STABLE (e.g., Cobble,Boulder)(2)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input checked="" type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	NONE(2)
<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/>	LOW(1)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0 % POOL 100 % RIFFLE _____ % Run _____ GRADIENT SCORE 6

STREAM: East Fork White River RIVER MILE 94.3 DATE: 9/24/2003 QHEI SCORE 59.5

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 14

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input checked="" type="checkbox"/>	BLDER/SLAB(10)			<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	LIMESTONE(1)	<input checked="" type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input checked="" type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)			<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)			<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>		<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	DETRITUS(3)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	ARTIFIC(0)	<input checked="" type="checkbox"/>		<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 12

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)					
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
						<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

10

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input checked="" type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input checked="" type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 7.5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input checked="" type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 10

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> LOW(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 0 % POOL 10 % RIFFLE 0 % Run 90 GRADIENT SCORE 6

STREAM: East Fork White River RIVER MILE 106.4 DATE: 9/24/2003 QHEI SCORE **72**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE **15**

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)				
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>			
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS:

2) INSTREAM COVER: (20)

COVER SCORE **11**

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/> DEEP POOLS(2)	<input type="checkbox"/> EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/> ROOTWADS(1)	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/> BOULDERS(1)	<input checked="" type="checkbox"/> SPARSE 5-25%(3)
		<input checked="" type="checkbox"/> LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input checked="" type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE **6.5**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE 30-150 ft.(3)
<input type="checkbox"/>	<input checked="" type="checkbox"/> NARROW 15-30 ft.(2)
<input type="checkbox"/>	<input type="checkbox"/> VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	<input type="checkbox"/> NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input type="checkbox"/> SHURB OR OLD FIELD(2)
<input type="checkbox"/>	<input type="checkbox"/> RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)
<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input checked="" type="checkbox"/>	<input type="checkbox"/> NONE OR LITTLE(3)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/> HEAVY OR SEVERE(1)

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE **12**

<u>MAX. DEPTH (Check 1)</u>	<u>MORPHOLOGY (Check 1)</u>	<u>POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)</u>	
<input checked="" type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS:

RIFFLE SCORE **6.5**

RIFFLE/RUN DEPTH

<input checked="" type="checkbox"/>	GENERALLY >4 in. MAX.>20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX.<20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input type="checkbox"/>	GENERALLY <2 in. (Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input checked="" type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)
<input checked="" type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	NONE(2)
<input type="checkbox"/>	MODERATE(0)	<input type="checkbox"/>	NO RIFFLE(0)
<input checked="" type="checkbox"/>	LOW(1)		

COMMENTS:

6) GRADIENT (FEET/MILE)(10): 0.6 % POOL 40 % RIFFLE 20 % Run 40 GRADIENT SCORE **8**

STREAM: East Fork White River RIVER MILE 119.6 DATE: 9/17/2003 QHEI SCORE 58.5

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 12

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)	
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TOTAL NUMBER OF SUBSTRATE TYPES:		<input type="checkbox"/> >4(2)		<input checked="" type="checkbox"/> <4(0)						

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS:

2) INSTREAM COVER: (20)

COVER SCORE 12

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	<input type="checkbox"/> SPARSE 5-25%(3)
		<input checked="" type="checkbox"/>	<input type="checkbox"/> NEARLY ABSENT <5%(1)

COMMENTS:

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

12

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION
<input checked="" type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input checked="" type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION

COMMENTS:

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 3.5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	<input type="checkbox"/> WIDE >150 ft.(4)	<input type="checkbox"/>	<input type="checkbox"/> FOREST, SWAMP(3)	<input type="checkbox"/>	<input type="checkbox"/> URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	<input type="checkbox"/> MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	<input checked="" type="checkbox"/> SHURB OR OLD FIELD(2)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	<input type="checkbox"/> RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	<input type="checkbox"/> CONSERV. TILLAGE(1)
<input type="checkbox"/>	<input type="checkbox"/> VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	<input type="checkbox"/> FENCED PASTURE(1)	<input type="checkbox"/>	<input type="checkbox"/> MINING/CONSTRUCTION(0)
<input type="checkbox"/>	<input type="checkbox"/> NONE(0)				

COMMENTS:

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 9

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)
<input type="checkbox"/> 2-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/> FAST(1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)		<input type="checkbox"/> EDDIES(1)
		<input type="checkbox"/> INTERSTITIAL(-1)
		<input type="checkbox"/> INTERMITTENT(-2)

COMMENTS:

RIFFLE SCORE 0

RIFFLE/RUN DEPTH

RIFFLE/RUN SUBSTRATE

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/> GENERALLY >4 in. MAX.>20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)
<input type="checkbox"/> GENERALLY >4 in. MAX.<20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)	<input type="checkbox"/> LOW(1)

COMMENTS:

6) GRADIENT (FEET/MILE)(10): 1.2 % POOL 10 % RIFFLE 0 % RUN 90 GRADIENT SCORE 10

STREAM: East Fork White River RIVER MILE 129.7 DATE: 9/16/2003 QHEI SCORE **63**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE **13**

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/>	BLDER/SLAB(10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input checked="" type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☒ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE **12**

TYPE (Check all that apply)				AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

12

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER					
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	NONE(6)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND		
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	RECOVERED(4)	<input type="checkbox"/>	RELOCATION	<input type="checkbox"/>	ISLAND		
<input checked="" type="checkbox"/>	LOW(2)	<input type="checkbox"/>	RECOVERING(3)	<input checked="" type="checkbox"/>	LOW(1)	<input type="checkbox"/>	CANOPY REMOVAL	<input type="checkbox"/>	LEVEED
<input type="checkbox"/>	NONE(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)			<input type="checkbox"/>	DREDGING	<input type="checkbox"/>	BANK SHAPING
						<input type="checkbox"/>	ONE SIDE CHANNEL MODIFICATION		

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE **7**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)
<input type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	<input checked="" type="checkbox"/> OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE **9**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)			
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/>	TORRENTIAL(-1)	<input type="checkbox"/>	EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/>	SLOW(1)		
<input type="checkbox"/> <0.6 ft.(Pool=0)(0)					

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS			
<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	NONE(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/>	LOW(1)		
<input type="checkbox"/> GENERALLY <2 in.(Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)				

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 1.1 % POOL 10 % RIFFLE 0 % RUN 90 GRADIENT SCORE **10**

STREAM: East Fork White River RIVER MILE 136.9 DATE: 9/16/2003 QHEI SCORE 64

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE 14

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input checked="" type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	LOW(0)	<input type="checkbox"/>	NONE(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☒ >4(2) ☐ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE 13

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)				
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input checked="" type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
						<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

12

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER								
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	NONE(6)	<input type="checkbox"/>	HIGH(3)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND			
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	RECOVERED(4)	<input type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	RELOCATION	<input type="checkbox"/>	ISLAND			
<input checked="" type="checkbox"/>	LOW(2)	<input type="checkbox"/>	RECOVERING(3)	<input checked="" type="checkbox"/>	LOW(1)	<input type="checkbox"/>	CANOPY REMOVAL	<input type="checkbox"/>	LEVEED			
<input type="checkbox"/>	NONE(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)	<input type="checkbox"/>						DREDGING	<input type="checkbox"/>	BANK SHAPING
						<input type="checkbox"/>				ONE SIDE CHANNEL MODIFICATION		

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE 5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHURB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE 10

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)			
<input checked="" type="checkbox"/>	>4 ft.(6)	<input type="checkbox"/>	TORRENTIAL(-1)	<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>	2.4-4 ft.(4)	<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/>	1.2-2.4 ft.(2)	<input checked="" type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/>	<1.2 ft.(1)	<input checked="" type="checkbox"/>	SLOW(1)		
<input type="checkbox"/>	<0.6 ft.(Pool=0)(0)				

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH

<input type="checkbox"/>	GENERALLY >4 in. MAX.>20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX.<20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input type="checkbox"/>	GENERALLY <2 in.(Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input checked="" type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	NONE(2)
<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/>	LOW(1)		

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 1.2 % POOL 20 % RIFFLE 0 % RUN 80 GRADIENT SCORE 10

STREAM: East Fork White River RIVER MILE 146.2 DATE: 9/15/2003 QHEI SCORE **63**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)(20)

SUBSTRATE SCORE **13**

TYPE		POOL	RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)							
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	SHALE(-1)						
<input type="checkbox"/>	MUCK/SILT(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)	<input type="checkbox"/>	NONE(1)
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2)		<input checked="" type="checkbox"/> <4(0)											

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER: (20)

COVER SCORE **12**

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)
<input checked="" type="checkbox"/>	ROOTWADS(1)		
<input type="checkbox"/>	BOULDERS(1)		
<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)(20)

12

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER			
<input type="checkbox"/>	EXCELLENT(7)	<input checked="" type="checkbox"/>	HIGH(3)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND
<input type="checkbox"/>	GOOD(5)	<input type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	RELOCATION	<input type="checkbox"/>	ISLAND
<input checked="" type="checkbox"/>	FAIR(3)	<input type="checkbox"/>	LOW(1)	<input type="checkbox"/>	CANOPY REMOVAL	<input type="checkbox"/>	LEEVEED
<input type="checkbox"/>	POOR(1)	<input type="checkbox"/>		<input type="checkbox"/>	DREDGING	<input type="checkbox"/>	BANK SHAPING
		<input type="checkbox"/>		<input type="checkbox"/>	ONE SIDE CHANNEL MODIFICATION		

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank) (10)

RIPARIAN SCORE **6**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)	<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)	<input checked="" type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	
<input type="checkbox"/>	NONE(0)				

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY (12)

NO POOL = 0

POOL SCORE **10**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/>	POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/>	TORRENTIAL(-1)
<input type="checkbox"/>	POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/>	FAST(1)
<input type="checkbox"/>	POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/>	MODERATE(1)
<input type="checkbox"/>		<input checked="" type="checkbox"/>	SLOW(1)
<input type="checkbox"/>		<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>		<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/>		<input type="checkbox"/>	INTERMITTENT(-2)

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/>	EXTENSIVE(-1)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/>	MODERATE(0)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/>	LOW(1)
<input checked="" type="checkbox"/>	NO RIFFLE(0)	<input checked="" type="checkbox"/>	NONE(2)
		<input checked="" type="checkbox"/>	NO RIFFLE(0)

COMMENTS: _____

6) GRADIENT (FEET/MILE)(10): 1.3 % POOL 20 % RIFFLE 0 % RUN 80 GRADIENT SCORE **10**

STREAM: East Fork White River RIVER MILE 154.5 DATE: 9/24/2003 QHEI SCORE 75

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE 13

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/>	MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	SPARSE(0)	<input type="checkbox"/>	LOW(1)		
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2)		<input checked="" type="checkbox"/> <4(0)													

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: Small portion of left bank at boat ramp is covered with rip-rap.

2) INSTREAM COVER:

COVER SCORE 13

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)					
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
				<input type="checkbox"/> NEARLY ABSENT <5%(1)			

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input checked="" type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input checked="" type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: A small island is present at bottom of station.

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE 9

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input type="checkbox"/>	WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input checked="" type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: Private boat ramp and several residences also present on left bank.

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0

POOL SCORE 12

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input checked="" type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: One riffle is present.

RIFFLE SCORE 7

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input checked="" type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input checked="" type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> LOW(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input checked="" type="checkbox"/> SPARSE(1)	
<input type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE): 0.9 % POOL 30 % RIFFLE 1 % Run 69 GRADIENT SCORE 8

STREAM: East Fork White River RIVER MILE 162.2 DATE: 9/23/2003 QHEI SCORE 64.25

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE 12

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	<u>Extent of Embeddedness (check one)</u>					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
<input type="checkbox"/>	MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input type="checkbox"/>	SPARSE(0)	<input type="checkbox"/>	LOW(1)		

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☒ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE 13

TYPE (Check all that apply)			AMOUNT (Check only one or Check 2 and AVERAGE)		
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	SPARSE 5-25%(3)
		<input type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER			
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	NONE(6)	<input type="checkbox"/>	SNAGGING	<input type="checkbox"/>	IMPOUND
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	RECOVERED(4)	<input checked="" type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	ISLAND
<input checked="" type="checkbox"/>	LOW(2)	<input type="checkbox"/>	RECOVERING(3)	<input type="checkbox"/>	LOW(1)	<input type="checkbox"/>	LEVEED
<input type="checkbox"/>	NONE(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)	<input type="checkbox"/>		<input type="checkbox"/>	BANK SHAPING
				<input type="checkbox"/>		<input type="checkbox"/>	ONE SIDE CHANNEL MODIFICATION

COMMENTS: Railroad bridge pier is on a very small man-made island.

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE 6.25

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)
<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)
<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input checked="" type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)
<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0

POOL SCORE 10

MAX. DEPTH (Check 1)

<input checked="" type="checkbox"/>	>4 ft.(6)
<input type="checkbox"/>	2.4-4 ft.(4)
<input type="checkbox"/>	1.2-2.4 ft.(2)
<input type="checkbox"/>	<1.2 ft.(1)
<input type="checkbox"/>	<0.6 ft.(Pool=0)(0)

MORPHOLOGY (Check 1)

<input type="checkbox"/>	POOL WIDTH > RIFFLE WIDTH(2)
<input checked="" type="checkbox"/>	POOL WIDTH = RIFFLE WIDTH(1)
<input type="checkbox"/>	POOL WIDTH < RIFFLE WIDTH(0)

POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)

<input type="checkbox"/>	TORRENTIAL(-1)	<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input checked="" type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input checked="" type="checkbox"/>	SLOW(1)		

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH

<input type="checkbox"/>	GENERALLY >4 in. MAX. >20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX. <20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input checked="" type="checkbox"/>	GENERALLY <2 in. (Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input checked="" type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	LOW(2)
<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/>	SPARSE(1)		

COMMENTS: _____

6) GRADIENT (FEET/MILE): 1.7 % POOL 40 % RIFFLE 0 % Run 60 GRADIENT SCORE 10

STREAM: East Fork White River RIVER MILE 166.6 DATE: 9/18/2003 QHEI SCORE 65

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE 12

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/>	BLDER/SLAB(10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BEDROCK(5)	<input type="checkbox"/>	<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DETRITUS(3)	<input type="checkbox"/>	<input type="checkbox"/>	SHALE(-1)						
<input type="checkbox"/>	MUCK/SILT(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARTIFIC(0)	<input type="checkbox"/>	<input type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
				<input type="checkbox"/>	SPARSE(0)	<input type="checkbox"/>	LOW(1)							

TOTAL NUMBER OF SUBSTRATE TYPES: ☐ >4(2) ☒ <4(0)

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE 12

TYPE (Check all that apply)		AMOUNT (Check only one or Check 2 and AVERAGE)					
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	OXBOWS(1)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input type="checkbox"/>	ROOTWADS(1)	<input type="checkbox"/>	AQUATIC MACROPHYTES(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
				<input type="checkbox"/>	NEARLY ABSENT <5%(1)		

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

13

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER							
<input type="checkbox"/>	HIGH(4)	<input checked="" type="checkbox"/>	EXCELLENT(7)	<input type="checkbox"/>	NONE(6)	<input type="checkbox"/>	HIGH(3)	<input type="checkbox"/>	SNAGGING	<input checked="" type="checkbox"/>	IMPOUND
<input type="checkbox"/>	MODERATE(3)	<input type="checkbox"/>	GOOD(5)	<input type="checkbox"/>	RECOVERED(4)	<input checked="" type="checkbox"/>	MODERATE(2)	<input type="checkbox"/>	RELOCATION	<input type="checkbox"/>	ISLAND
<input checked="" type="checkbox"/>	LOW(2)	<input type="checkbox"/>	FAIR(3)	<input type="checkbox"/>	RECOVERING(3)	<input type="checkbox"/>	LOW(1)	<input type="checkbox"/>	CANOPY REMOVAL	<input type="checkbox"/>	LEVEED
<input type="checkbox"/>	NONE(1)	<input type="checkbox"/>	POOR(1)	<input type="checkbox"/>	RECENT OR NO RECOVERY(1)	<input type="checkbox"/>		<input type="checkbox"/>	DREDGING	<input type="checkbox"/>	BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION							

COMMENTS: Low-head dam approximately 3,000 feet downstream may be affecting the flow in this station.

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE 8

River Right Looking Downstream

RIPARIAN WIDTH (per bank)

L	R (per bank)	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WIDE >150 ft.(4)
<input type="checkbox"/>	<input type="checkbox"/>	MODERATE 30-150 ft.(3)
<input type="checkbox"/>	<input type="checkbox"/>	NARROW 15-30 ft.(2)
<input type="checkbox"/>	<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	NONE(0)

EROSION/RUNOFF-FLOODPLAIN QUALITY

L	R (most predominant per bank)	L	R (per bank)	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)
<input type="checkbox"/>	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input checked="" type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)

BANK EROSION

L	R (per bank)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NONE OR LITTLE(3)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	<input type="checkbox"/>	HEAVY OR SEVERE(1)

COMMENTS: Approximately 1/3 of right bank is unprotected by any riparian vegetation due to farming to edge of river.

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0

POOL SCORE 10

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TORRENTIAL(-1)	<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SLOW(1)		

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH

<input type="checkbox"/>	GENERALLY >4 in. MAX. >20 in.(4)
<input type="checkbox"/>	GENERALLY >4 in. MAX. <20 in.(3)
<input type="checkbox"/>	GENERALLY 2-4 in.(1)
<input checked="" type="checkbox"/>	GENERALLY <2 in.(Riffle=0)(0)

RIFFLE/RUN SUBSTRATE

<input type="checkbox"/>	STABLE (e.g., Cobble, Boulder)(2)
<input type="checkbox"/>	MOD. STABLE (e.g., Pea Gravel)(1)
<input type="checkbox"/>	UNSTABLE (Gravel, Sand)(0)
<input checked="" type="checkbox"/>	NO RIFFLE(0)

RIFFLE/RUN EMBEDDEDNESS

<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	LOW(2)
<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/>	SPARSE(1)		

COMMENTS: _____

6) GRADIENT (FEET/MILE): 1.7 % POOL 80 % RIFFLE 0 % Run 20 GRADIENT SCORE 10

STREAM: East Fork White River RIVER MILE 177.6 DATE: 9/17/2003 QHEI SCORE 61.5

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE 12

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)						
<input type="checkbox"/>	BLDER/SLAB(10)			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)							<input type="checkbox"/>	SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)							<input type="checkbox"/>	SHALE(-1)						
<input type="checkbox"/>	MUCK/SILT(2)							<input type="checkbox"/>	COAL FINES(-2)	<input checked="" type="checkbox"/>	EXTENSIVE(-2)	<input type="checkbox"/>	MODERATE(-1)		
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2) <input checked="" type="checkbox"/> <4(0)															

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE 13

TYPE (Check all that apply)				AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

11

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/>	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/>	<input type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/>	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/>	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/>	<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE 5.5

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION	
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)	<input type="checkbox"/>	FOREST, SWAMP(3)	<input type="checkbox"/>	URBAN OR INDUSTRIAL(0)
<input type="checkbox"/>	MODERATE 30-150 ft.(3)	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input type="checkbox"/>	SHRUB OR OLD FIELD(2)
<input type="checkbox"/>	<input checked="" type="checkbox"/> NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input checked="" type="checkbox"/>	CONSERV. TILLAGE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)
<input type="checkbox"/>	NONE(0)				

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0

POOL SCORE 10

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)			
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/>	TORRENTIAL(-1)	<input checked="" type="checkbox"/>	EDDIES(1)
<input type="checkbox"/> 2.4-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input type="checkbox"/>	FAST(1)	<input type="checkbox"/>	INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/>	MODERATE(1)	<input type="checkbox"/>	INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/>	SLOW(1)		
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)					

COMMENTS: _____

RIFFLE SCORE 0

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS			
<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/>	EXTENSIVE(-1)	<input type="checkbox"/>	LOW(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/>	MODERATE(0)	<input checked="" type="checkbox"/>	NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/>	SPARSE(1)		
<input checked="" type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)				

COMMENTS: _____

6) GRADIENT (FEET/MILE): 1.9 % POOL 40 % RIFFLE 0 % Run 60 GRADIENT SCORE 10

STREAM: East Fork White River RIVER MILE 189.1 DATE: 9/16/2003 QHEI SCORE **64**

1) SUBSTRATE: (Check ONLY Two Substrate Type Boxes: Check all types present)

SUBSTRATE SCORE **13**

TYPE		POOL	RIFFLE	POOL		RIFFLE	SUBSTRATE ORIGIN (all)		SILT COVER (one)					
<input type="checkbox"/>	BLDER/SLAB(10)			<input checked="" type="checkbox"/>	GRAVEL(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LIMESTONE(1)	<input type="checkbox"/>	RIP/RAP(0)	<input type="checkbox"/>	SILT-HEAVY(-2)	<input type="checkbox"/>	SILT-MOD(-1)
<input type="checkbox"/>	BOULDER(9)			<input checked="" type="checkbox"/>	SAND(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TILLS(1)	<input type="checkbox"/>	HARDPAN(0)	<input checked="" type="checkbox"/>	SILT-NORM(0)	<input type="checkbox"/>	SILT-FREE(1)
<input type="checkbox"/>	COBBLE(8)			<input type="checkbox"/>	BEDROCK(5)			SANDSTONE(0)	Extent of Embeddedness (check one)					
<input type="checkbox"/>	HARDPAN(4)			<input type="checkbox"/>	DETRITUS(3)			SHALE(-1)						
<input type="checkbox"/>	MUCK/SILT(2)			<input type="checkbox"/>	ARTIFIC(0)			COAL FINES(-2)	<input type="checkbox"/>	EXTENSIVE(-2)	<input checked="" type="checkbox"/>	MODERATE(-1)		
TOTAL NUMBER OF SUBSTRATE TYPES: <input type="checkbox"/> >4(2)				<input checked="" type="checkbox"/> <4(0)				<input type="checkbox"/>		SPARSE(0)		<input type="checkbox"/>	LOW(1)	

NOTE: (Ignore sludge that originates from point sources: score is based on natural substrates)

COMMENTS: _____

2) INSTREAM COVER:

COVER SCORE **13**

TYPE (Check all that apply)				AMOUNT (Check only one or Check 2 and AVERAGE)	
<input type="checkbox"/>	UNDERCUT BANKS(1)	<input checked="" type="checkbox"/>	DEEP POOLS(2)	<input type="checkbox"/>	EXTENSIVE >75%(11)
<input checked="" type="checkbox"/>	OVERHANGING VEGETATION(1)	<input checked="" type="checkbox"/>	ROOTWADS(1)	<input checked="" type="checkbox"/>	MODERATE 25-75%(7)
<input checked="" type="checkbox"/>	SHALLOWS (IN SLOW WATER)(1)	<input type="checkbox"/>	BOULDERS(1)	<input type="checkbox"/>	SPARSE 5-25%(3)
		<input checked="" type="checkbox"/>	LOGS OR WOODY DEBRIS(1)	<input type="checkbox"/>	NEARLY ABSENT <5%(1)

COMMENTS: _____

3) CHANNEL MORPHOLOGY: (Check ONLY ONE per Category or Check 2 and AVERAGE)

11

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY	MODIFICATION/OTHER	
<input type="checkbox"/> HIGH(4)	<input type="checkbox"/> EXCELLENT(7)	<input checked="" type="checkbox"/> NONE(6)	<input type="checkbox"/> HIGH(3)	<input type="checkbox"/> SNAGGING	<input type="checkbox"/> IMPOUND
<input type="checkbox"/> MODERATE(3)	<input type="checkbox"/> GOOD(5)	<input type="checkbox"/> RECOVERED(4)	<input checked="" type="checkbox"/> MODERATE(2)	<input type="checkbox"/> RELOCATION	<input type="checkbox"/> ISLAND
<input checked="" type="checkbox"/> LOW(2)	<input type="checkbox"/> FAIR(3)	<input type="checkbox"/> RECOVERING(3)	<input type="checkbox"/> LOW(1)	<input type="checkbox"/> CANOPY REMOVAL	<input type="checkbox"/> LEVEED
<input type="checkbox"/> NONE(1)	<input checked="" type="checkbox"/> POOR(1)	<input type="checkbox"/> RECENT OR NO RECOVERY(1)		<input type="checkbox"/> DREDGING	<input type="checkbox"/> BANK SHAPING
				<input type="checkbox"/> ONE SIDE CHANNEL MODIFICATION	

COMMENTS: _____

4) RIPARIAN ZONE AND BANK EROSION: (Check ONE box or Check 2 and AVERAGE per bank)

RIPARIAN SCORE **6**

River Right Looking Downstream

RIPARIAN WIDTH (per bank)		EROSION/RUNOFF-FLOODPLAIN QUALITY		BANK EROSION			
L	R (per bank)	L	R (most predominant per bank)	L	R (per bank)		
<input checked="" type="checkbox"/>	WIDE >150 ft.(4)	<input type="checkbox"/>	FOREST, SWAMP(3)	<input checked="" type="checkbox"/>	URBAN OR INDUSTRIAL(0)	<input type="checkbox"/>	NONE OR LITTLE(3)
<input checked="" type="checkbox"/>	MODERATE 30-150 ft.(3)	<input type="checkbox"/>	OPEN PASTURE/ROW CROP(0)	<input checked="" type="checkbox"/>	SHRUB OR OLD FIELD(2)	<input checked="" type="checkbox"/>	MODERATE(2)
<input type="checkbox"/>	NARROW 15-30 ft.(2)	<input type="checkbox"/>	RESID., PARK, NEW FIELD(1)	<input type="checkbox"/>	CONSERV. TILLAGE(1)	<input type="checkbox"/>	HEAVY OR SEVERE(1)
<input type="checkbox"/>	VERY NARROW 3-15 ft.(1)	<input type="checkbox"/>	FENCED PASTURE(1)	<input type="checkbox"/>	MINING/CONSTRUCTION(0)		
<input type="checkbox"/>	NONE(0)						

COMMENTS: _____

5) POOL/GLIDE AND RIFFLE/RUN QUALITY

NO POOL = 0

POOL SCORE **11**

MAX. DEPTH (Check 1)	MORPHOLOGY (Check 1)	POOL/RUN/RIFFLE CURRENT VELOCITY (Check all that Apply)	
<input checked="" type="checkbox"/> >4 ft.(6)	<input type="checkbox"/> POOL WIDTH > RIFFLE WIDTH(2)	<input type="checkbox"/> TORRENTIAL(-1)	<input checked="" type="checkbox"/> EDDIES(1)
<input type="checkbox"/> 2-4 ft.(4)	<input checked="" type="checkbox"/> POOL WIDTH = RIFFLE WIDTH(1)	<input checked="" type="checkbox"/> FAST(1)	<input type="checkbox"/> INTERSTITIAL(-1)
<input type="checkbox"/> 1.2-2.4 ft.(2)	<input type="checkbox"/> POOL WIDTH < RIFFLE WIDTH(0)	<input checked="" type="checkbox"/> MODERATE(1)	<input type="checkbox"/> INTERMITTENT(-2)
<input type="checkbox"/> <1.2 ft.(1)		<input checked="" type="checkbox"/> SLOW(1)	
<input type="checkbox"/> <0.6 ft. (Pool=0)(0)			

COMMENTS: _____

RIFFLE SCORE **0**

RIFFLE/RUN DEPTH	RIFFLE/RUN SUBSTRATE	RIFFLE/RUN EMBEDDEDNESS	
<input type="checkbox"/> GENERALLY >4 in. MAX. >20 in.(4)	<input type="checkbox"/> STABLE (e.g., Cobble, Boulder)(2)	<input type="checkbox"/> EXTENSIVE(-1)	<input type="checkbox"/> LOW(2)
<input type="checkbox"/> GENERALLY >4 in. MAX. <20 in.(3)	<input type="checkbox"/> MOD. STABLE (e.g., Pea Gravel)(1)	<input type="checkbox"/> MODERATE(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)
<input type="checkbox"/> GENERALLY 2-4 in.(1)	<input type="checkbox"/> UNSTABLE (Gravel, Sand)(0)	<input type="checkbox"/> SPARSE(1)	
<input checked="" type="checkbox"/> GENERALLY <2 in. (Riffle=0)(0)	<input checked="" type="checkbox"/> NO RIFFLE(0)		

COMMENTS: _____

6) GRADIENT (FEET/MILE): 2.2 % POOL 25 % RIFFLE 0 % Run 75 GRADIENT SCORE **10**

DATE: 9/24/2003

STATION: RM 1.00 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	77	26.7	2.9 - 13.1	9.75	4.8
Spotted bass	52	18.1	2.3 - 12.5	12.52	6.1
Steelcolor shiner	19	6.6	1.8 - 2.9	0.08	*
Emerald shiner	18	6.3	1.6 - 3.4	0.11	0.1
Mississippi silvery minnow	16	5.6	2.1 - 2.5	0.06	*
Shortnose gar	15	5.2	16.0 - 24.2	17.40	8.5
Common carp	14	4.9	19.8 - 27.0	68.90	33.8
Channel catfish	12	4.2	8.0 - 20.4	18.78	9.2
Freshwater drum	10	3.5	9.9 - 14.9	12.00	5.9
White bass	8	2.8	4.3 - 13.1	4.63	2.3
Longear sunfish	7	2.4	2.0 - 4.7	1.08	0.5
Shorthead redhorse	6	2.1	14.2 - 18.7	10.99	5.4
Spotfin shiner	6	2.1	2.0 - 2.5	0.01	*
Blue sucker	5	1.7	22.2 - 26.2	24.78	12.2
Sauger	4	1.4	12.3 - 15.5	2.84	1.4
Flathead catfish	3	1.0	9.6 - 11.0	1.17	0.6
Goldeye	3	1.0	13.3 - 17.8	2.95	1.4
Longnose gar	3	1.0	26.8 - 35.5	10.90	5.3
Bluegill	2	0.7	1.6 - 1.8	0.01	*
River carpsucker	2	0.7	16.5 - 16.7	4.17	2.0
Bluntnose minnow	1	0.3	2.3	0.01	*
Black crappie	1	0.3	4.2	0.40	0.2
Grass pickerel	1	0.3	7.3	0.10	*
Orangespotted sunfish	1	0.3	1.9	0.01	*
Skipjack herring	1	0.3	7.8	0.12	*
Smallmouth bass	1	0.3	3.0	0.02	*
Total	288			203.79	

* Less than 0.1%

** Less than 0.1 pound

STATION: RM 1.00 Seine 2 Hauls

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

71

DATE: 9/23/2003

STATION: RM 17.11 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	41	28.9	3.5 - 11.8	10.25	8.1
Freshwater drum	18	12.7	7.4 - 15.7	14.26	11.3
Emerald shiner	14	9.9	2.5 - 4.0	0.01	*
Spotted bass	10	7.0	2.5 - 9.7	1.51	1.2
Longear sunfish	8	5.6	2.5 - 5.0	0.29	0.2
Shortnose gar	8	5.6	19.7 - 22.2	8.63	6.8
Bluegill	5	3.5	3.7 - 7.3	0.48	0.4
Common carp	5	3.5	21.5 - 24.2	26.60	21.0
River carpsucker	5	3.5	6.9 - 17.9	6.84	5.4
Bigmouth buffalo	4	2.8	15.8 - 22.3	19.57	15.5
Goldeye	4	2.8	10.9 - 16.3	3.37	2.7
Blue sucker	3	2.1	24.4 - 26.2	15.50	12.3
Mooneye	3	2.1	5.7 - 10.2	0.62	0.5
Flathead catfish	2	1.4	17.7 - 18	4.11	3.3
Smallmouth buffalo	2	1.4	8.8 - 20.2	4.75	3.8
Steelcolor shiner	2	1.4	2.3 - 2.5	0.01	*
Channel catfish	1	0.7	12.8	0.52	0.4
Golden redhorse	1	0.7	17.8	2.56	2.0
Highfin carpsucker	1	0.7	10.0	0.37	0.3
Mississippi silvery minnow	1	0.7	3.7	0.01	*
Sauger	1	0.7	17.1	1.55	1.2
Shorthead redhorse	1	0.7	21.0	3.03	2.4
Skipjack herring	1	0.7	7.0	0.10	0.1
Spotted gar	1	0.7	23.3	1.45	1.1
Total	142			126.39	

* Less than 0.1%

** Less than 0.1 pound

STATION: RM 17.11 Seine 4 hauls

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

* Less than 0.1%
** Less than 0.1 pound

DATE: 6/14/2003

STATION: RM 26.14 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	115	50.0	3.5 - 11.9	26.50	20.7
Steelcolor shiner	21	9.1	1.8 - 3.3	0.13	0.1
Emerald shiner	15	6.5	1.8 - 4.3	0.19	0.1
Freshwater drum	13	5.7	7.8 - 17.4	8.41	6.6
Spotted bass	13	5.7	2.7 - 9.8	2.37	1.8
Longear sunfish	8	3.5	2.8 - 6.7	0.80	0.6
River carpsucker	8	3.5	11.6 - 16.8	14.86	11.6
Goldeye	6	2.6	10.1 - 13.8	3.23	2.5
Shortnose gar	6	2.6	20.2 - 23.0	7.92	6.2
Common carp	5	2.2	20.3 - 22.9	24.30	19.0
Flathead catfish	4	1.7	8.8 - 13.4	2.28	1.8
Dusky darter	2	0.9	2.1 - 3.5	0.01	*
Mooneye	2	0.9	8.8 - 9.2	0.54	0.4
Sauger	2	0.9	14.9 - 15.6	2.09	1.6
Smallmouth buffalo	2	0.9	18.7 - 28.4	14.82	11.6
Harlequin darter	1	0.4	2.1	0.01	*
Longnose gar	1	0.4	38.6	5.50	4.3
River redhorse	1	0.4	23.7	6.00	4.7
Shorthead redhorse	1	0.4	20.1	2.92	2.3
Shovelnose sturgeon	1	0.4	22.0	0.93	0.7
Silver lamprey	1	0.4	8.3	0.06	*
Smallmouth bass	1	0.4	7.9	0.22	0.2
Walleye	1	0.4	23.0	4.08	3.2
Total	230			128.17	

* Less than 0.1%

** Less than 0.1 pound

STATION: RM 26.14 Seine 4 Hauls

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

75

DATE: 6/14/2004

STATION: RM 40.88 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	117	47.8	6.6 - 14.2	27.25	16.8
Freshwater drum	19	7.8	7.3 - 18.0	19.30	11.9
Steelcolor shiner	16	6.5	1.7 - 2.5	0.06	*
Spotted bass	14	5.7	3.0 - 13.4	4.29	2.6
Mooneye	9	3.7	5.5 - 11.6	2.69	1.7
Mississippi silvery minnow	8	3.3	3.1 - 4.0	0.13	0.1
Emerald shiner	7	2.9	2.9 - 4.3	0.13	0.1
Smallmouth buffalo	6	2.4	15.1 - 29.6	28.75	17.7
Goldeye	5	2.0	13.2 - 16.1	5.41	3.3
Longear sunfish	5	2.0	3.2 - 5.1	0.33	0.2
Shorthead redhorse	5	2.0	15.8 - 17.3	8.75	5.4
River carpsucker	4	1.6	15.1 - 17.3	7.16	4.4
Channel catfish	3	1.2	9.8 - 12.0	0.96	0.6
Bluegill	3	1.2	1.8 - 3.3	0.05	*
Bigmouth buffalo	2	0.8	19.1 - 24.4	11.85	7.3
Flathead catfish	2	0.8	11.5 - 20.9	4.74	2.9
Longnose gar	2	0.8	23.2 - 43.0	9.97	6.1
River redhorse	2	0.8	23.0 - 25.4	10.75	6.6
Sauger	2	0.8	12.7 - 15.9	1.57	1.0
Smallmouth bass	2	0.8	2.7 - 12.1	0.87	0.5
Warmouth	2	0.8	3.2 - 4.2	0.07	*
White bass	2	0.8	11.1 - 11.7	1.34	0.8
Black crappie	1	0.4	7.1	0.20	0.1
Blue sucker	1	0.4	25.4	5.75	3.5
Common carp	1	0.4	22.9	5.50	3.4
Golden redhorse	1	0.4	7.5	0.17	0.1
Northern hog sucker	1	0.4	9.5	0.37	0.2
Quillback	1	0.4	18.0	2.55	1.6
Shortnose gar	1	0.4	24.0	1.40	0.9
Skipjack herring	1	0.4	10.2	0.30	0.2
Total	245			162.66	

*Less than 0.1%

DATE: 6/14/2004

STATION: RM 40.88 Seine 4 HaulsNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Steelcolor shiner	230	50.8	1.3 - 3.2	0.36	32.7
Spotfin shiner	67	14.8	1.3 - 2.2	0.08	7.3
Channel catfish	63	13.9	1.6 - 3.5	0.28	25.5
Mississippi silvery minnow	53	11.7	1.2 - 3.4	0.19	17.3
Bluntnose minnow	14	3.1	1.0 - 2.7	0.05	4.5
Brook silverside	7	1.5	2.1 - 2.4	0.01	0.9
Emerald shiner	5	1.1	1.3 - 3.0	0.01	0.9
Mimic shiner	4	0.9	1.5 - 1.8	0.01	0.9
Eastern sand darter	2	0.4	2.0 - 2.1	0.01	0.9
Sand shiner	2	0.4	1.7 - 2.0	0.01	0.9
Blackstripe topminnow	1	0.2	1.8	0.01	0.9
Dusky darter	1	0.2	2.2	0.01	0.9
Quillback	1	0.2	4.1	0.03	2.7
Redear sunfish	1	0.2	3.3	0.02	1.8
Silver redhorse	1	0.2	3.0	0.01	0.9
Speckled chub	1	0.2	1.5	0.01	0.9
Total	453			1.10	

DATE: 6/14/2004

STATION: RM 42.07 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	40	23.3	6.4 - 12.6	13.66	12.2
Longear sunfish	26	15.1	2.5 - 5.1	1.25	1.1
Steelcolor shiner	23	13.4	1.7 - 3.3	0.10	0.1
Freshwater drum	21	12.2	7.4 - 25.7	32.65	29.1
Emerald shiner	19	11.0	2.7 - 4.0	0.18	0.2
Spotted bass	15	8.7	2.5 - 11.4	3.56	3.2
Channel catfish	6	3.5	10.1 - 17.0	5.22	4.7
Common carp	4	2.3	18.4 - 23.2	21.75	19.4
Flathead catfish	3	1.7	4.0 - 16.9	2.42	2.2
Smallmouth buffalo	3	1.7	17.4 - 23.1	13.30	11.9
Mooneye	2	1.2	10.9 - 11.1	1.04	0.9
River carpsucker	2	1.2	14.9 - 16.2	3.50	3.1
Bluegill	1	0.6	5.6	0.15	0.1
Bigmouth buffalo	1	0.6	19.6	4.25	3.8
Black buffalo	1	0.6	21.1	5.00	4.5
Chestnut lamprey	1	0.6	7.2	0.03	*
Dusky darter	1	0.6	2.7	0.01	*
Goldeye	1	0.6	15.4	1.20	1.1
Largemouth bass	1	0.6	7.8	0.22	0.2
Silver redhorse	1	0.6	18.2	2.55	2.3
Total	172			112.04	

*Less than 0.1%

STATION: RM 42.07 Seine 4 Hauls

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

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DATE: 9/25/03

STATION: RM 75.08 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard Shad	258	50.5	4.2-13.2	66.13	18.5
Longear Sunfish	44	8.6	2.4-6.1	2.64	0.7
Spotted Bass	23	4.5	3.1-13.2	8.71	2.4
Smallmouth Buffalo	22	4.3	14.3-23.8	84.39	23.6
River Carpsucker	21	4.1	8.7-16.3	21.57	6.0
Emerald Shiner	21	4.1	2.7-3.6	0.40	0.1
Channel Catfish	15	2.9	2.7-23.2	27.84	7.8
Freshwater Drum	15	2.9	7.7-21.7	22.63	6.3
Sauger	11	2.2	11.5-16.4	8.51	2.4
Smallmouth Bass	10	2.0	3.0-8.0	1.17	0.3
Steelcolor Shiner	10	2.0	1.5-3.3	0.06	0.0
Spotfin Shiner	9	1.8	2.0-2.6	0.04	0.0
Blue Sucker	5	1.0	23.6-27.3	28.50	8.0
Common Carp	4	0.8	20.3-26.8	28.38	7.9
Shortnose Gar	4	0.8	21.3-23.2	5.19	1.4
Shorthead Redhorse	4	0.8	3.9-16.4	3.37	0.9
Bluntnose Minnow	4	0.8	2.0-2.4	0.02	0.0
Bigmouth Buffalo	3	0.6	19.6-24.5	18.32	5.1
Longnose Gar	3	0.6	15.8-24.8	1.75	0.5
Highfin Carpsucker	3	0.6	7.9-9.1	0.98	0.3
Logperch	3	0.6	5.7-6.0	0.22	0.1
Slenderhead Darter	3	0.6	2.7-3.0	0.02	0.0
Golden Redhorse	2	0.4	14.7-15.0	2.83	0.8
Flathead Catfish	2	0.4	14.4-17.1	2.80	0.8
Largemouth Bass	2	0.4	8.0-13.1	1.41	0.4
Black Buffalo	1	0.2	23.9	7.88	2.2
River Redhorse	1	0.2	23.4	5.38	1.5
Silver Redhorse	1	0.2	21.6	4.35	1.2
Black Redhorse	1	0.2	15	1.31	0.4
Black Crappie	1	0.2	9.4	0.49	0.1
Skipjack Herring	1	0.2	10.2	0.34	0.1
White Crappie	1	0.2	9.2	0.34	0.1
Bluegill	1	0.2	6.5	0.21	0.1
Brook Silverside	1	0.2	2.5	0.01	0.0
Spotted Darter	1	0.2	2.5	0.01	0.0
Total - Species	511	100.0		358.20	100.0

DATE: 9/25/03

STATION: RM 75.08 SeineNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED (SEINING)

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin Shiner	118	53.4	0.6-2.7	0.17	50.0
Steelcolor Shiner	57	25.8	0.9-2.1	0.06	17.6
Emerald Shiner	15	6.8	0.7-2.6	0.01	2.9
Gizzard Shad	8	3.6	1.1-4.7	0.03	8.8
Brook Silverside	7	3.2	2.1-2.5	0.02	5.9
Bullhead Minnow	6	2.7	1.0-1.2	0.01	2.9
Mississippi Silvery Minnow	4	1.8	1.7-2.2	0.01	2.9
Longear Sunfish	3	1.4	0.6-1.4	0.01	2.9
Bluntnose Minnow	2	0.9	1.5	0.01	2.9
Golden Redhorse	1	0.5	2.0	0.01	2.9
Total - Species	221	100.0		0.34	100.0

DATE: 9/15/03

STATION: RM 85.1 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard Shad	85	40.3	2.5-9.4	3.74	1.9
Spotted Bass	23	10.9	2.7-12.8	8.57	4.3
Spotfin Shiner	20	9.5	2.0-3.0	0.12	0.1
Smallmouth Buffalo	16	7.6	8.8-39.3	96.63	48.6
Freshwater Drum	16	7.6	11.0-24.9	44.38	22.3
Bluegill	14	6.6	1.5-5.4	0.36	0.2
Channel Catfish	10	4.7	8.8-20.2	12.49	6.3
Bullhead Minnow	6	2.8	1.9-2.6	0.04	0.0
Longear Sunfish	5	2.4	2.9-3.5	0.12	0.1
Common Carp	4	1.9	22.3-26.2	29.94	15.1
Steelcolor Shiner	4	1.9	2.3-2.5	0.01	0.0
Flathead Catfish	2	0.9	13.8-14.1	1.85	0.9
Shorthead Redhorse	2	0.9	7.2	0.29	0.1
Blackstripe Topminnow	2	0.9	2.5	No weights	0.0
Black Crappie	1	0.5	7.3	0.20	0.1
Largemouth Bass	1	0.5	7.5	0.19	0.1
Total - Species	211	100.0		198.93	100.0

DATE: 9/15/03

STATION: RM 85.1 SeineNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED (SEINING)

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Bullhead Minnow	119	56.7	0.7-2.7	0.25	61.0
Spotfin Shiner	47	22.4	0.8-2.6	0.05	12.2
Bluntnose Minnow	19	9.0	0.8-2.1	0.02	4.9
Brook Silverside	16	7.6	1.3-2.5	0.03	7.3
Striped Shiner	2	1.0	1.7-1.9	0.01	2.4
Ghost Shiner	2	1.0	1.6-1.8	0.01	2.4
Steelcolor Shiner	2	1.0	1.1-1.2	0.01	2.4
Spotted Bass	1	0.5	2.9	0.01	2.4
Mississippi Silvery Minnow	1	0.5	2.0	0.01	2.4
Longear Sunfish	1	0.5	1.5	0.01	2.4
Total - Species	210	100.0		0.41	100.0

DATE: 9/24/03

STATION: RM 94.3 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard Shad	162	31.9	2.6-12.2	15.50	7.5
Spotfin Shiner	75	14.8	1.3-2.8	0.26	0.1
Emerald Shiner	48	9.4	2.8-4.1	0.47	0.2
Steelcolor Shiner	47	9.3	1.3-3.7	0.21	0.1
Bullhead Minnow	44	8.7	1.7-2.9	0.20	0.1
Freshwater Drum	31	6.1	11.2-19.8	47.30	22.8
Channel Catfish	22	4.3	2.9-24.7	40.42	19.5
Spotted Bass	19	3.7	2.6-14.7	9.97	4.8
Longear Sunfish	14	2.8	2.3-5.4	0.57	0.3
Bluegill	8	1.6	2.8-7.8	0.88	0.4
River Redhorse	5	1.0	20.2-24.2	25.30	12.2
Bluntnose Minnow	4	0.8	2.1-2.5	0.02	0.0
Flathead Catfish	3	0.6	7.6-34.0	32.92	15.9
Chestnut Lamprey	3	0.6	8.6-8.7	0.13	0.1
Brook Silverside	3	0.6	1.4-2.4	0.01	0.0
Common Carp	2	0.4	23.1-25.6	15.51	7.5
Smallmouth Buffalo	2	0.4	15.5-17.7	5.47	2.6
River Carpsucker	2	0.4	16.0-19.1	5.24	2.5
Shorthead Redhorse	2	0.4	13.5-15.6	2.30	1.1
Largemouth Bass	2	0.4	3.1-16.0	2.04	1.0
Rainbow Darter	2	0.4	2.0	0.01	0.0
Golden Redhorse	1	0.2	15.3	1.63	0.8
Silver Redhorse	1	0.2	12.1	0.76	0.4
Redear Sunfish	1	0.2	6.1	0.13	0.1
Slenderhead Darter	1	0.2	2.9	0.01	0.0
Smallmouth Bass	1	0.2	2.7	0.01	0.0
Greenside Darter	1	0.2	2.6	0.01	0.0
Striped Shiner	1	0.2	2.1	0.01	0.0
Dusky Darter	1	0.2	1.9	0.01	0.0
Total - Species	508	100.0		207.30	100.0

DATE: 9/24/03

STATION: RM 94.3 SeineNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED (SEINING)

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin Shiner	133	36.0	0.7-2.9	0.20	22.0
Bullhead Minnow	109	29.5	0.8-2.6	0.25	27.5
Steelcolor Shiner	58	15.7	1.2-2.4	0.07	7.7
Brook Silverside	20	5.4	1.9-2.7	0.05	5.5
Channel Catfish	16	4.3	2.1-3.2	0.09	9.9
Bluntnose Minnow	14	3.8	1.1-2.1	0.02	2.2
Gizzard Shad	7	1.9	3.7-4.7	0.13	14.3
Spotted Bass	7	1.9	2.5-3.0	0.05	5.5
Ghost Shiner	2	0.5	1.7-1.8	0.01	1.1
Bluegill	1	0.3	3.5	0.02	2.2
Rosyface Shiner	1	0.3	2.1	0.01	1.1
Redear Sunfish	1	0.3	2.1	0.01	1.1
Total - Species	369	100.0		0.91	100.0

DATE: 9/17/03

STATION: RM 104 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard Shad	73	31.6	6.9-13.8	17.99	5.2
Freshwater Drum	28	12.1	7.6-21.0	45.06	13.0
Smallmouth Buffalo	21	9.1	15.5-26.3	95.23	27.5
Spotted Bass	12	5.2	6.8-12.6	4.79	1.4
Emerald Shiner	12	5.2	3.0-3.5	0.11	0.0
Steelcolor Shiner	12	5.2	2.0-3.0	0.07	0.0
Bigmouth Buffalo	11	4.8	18.0-25.2	69.23	20.0
Blue Sucker	8	3.5	21.0-27.8	36.42	10.5
Slenderhead Darter	7	3.0	2.8-3.2	0.07	0.0
Shorthead Redhorse	6	2.6	16.1-20.6	12.63	3.6
Channel Catfish	6	2.6	12.4-22.7	11.12	3.2
Common Carp	4	1.7	19.3-22.8	21.55	6.2
Shortnose Gar	4	1.7	20.9-22.5	4.97	1.4
Longnose Gar	3	1.3	21.7-25.1	3.18	0.9
Flathead Catfish	3	1.3	12.3-16.5	2.89	0.8
Logperch	3	1.3	5.5-5.6	0.16	0.0
Longear Sunfish	3	1.3	3.4-3.7	0.10	0.0
Spotfin Shiner	3	1.3	2.4-3.4	0.02	0.0
River Carpsucker	2	0.9	14.7-15.2	2.82	0.8
Sauger	2	0.9	12.2-16.4	1.85	0.5
River Redhorse	1	0.4	26.6	7.31	2.1
Grass Carp	1	0.4	23.7	5.15	1.5
Goldeye	1	0.4	16.8	1.60	0.5
Silver Redhorse	1	0.4	14.1	1.15	0.3
Redear Sunfish	1	0.4	8.1	0.33	0.1
Skipjack Herring	1	0.4	10	0.29	0.1
Bluegill	1	0.4	6.5	0.18	0.1
Silver Lamprey	1	0.4	8.1	0.05	0.0
Total - Species	231	100.0		346.32	100.0

DATE: 9/17/03

STATION: RM 104 Seine

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED (SEINING)

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin Shiner	100	84.0	0.6-2.4	0.16	76.2
Steelcolor Shiner	14	11.8	0.8-2.3	0.02	9.5
Emerald Shiner	3	2.5	1.6-1.7	0.01	4.8
Ghost Shiner	1	0.8	1.8	0.01	4.8
Bullhead Minnow	1	0.8	1.2	0.01	4.8
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
		0.0			0.0
Total - Species	119	100.0		0.21	100.0

DATE: 9/24/03

STATION: RM 106.4 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard Shad	366	60.1	2.4-12.6	89.45	28.5
Spotted Bass	31	5.1	3.8-10.8	10.13	3.2
Bullhead Minnow	30	4.9	1.6-2.7	0.20	0.1
Steelcolor Shiner	29	4.8	1.9-3.6	0.20	0.1
Spotfin Shiner	25	4.1	1.4-2.8	0.10	0.0
Mississippi Silvery Minnow	23	3.8	2.1-3.4	0.16	0.1
Channel Catfish	21	3.4	2.3-26.2	38.57	12.3
Longear Sunfish	13	2.1	2.6-6.2	1.09	0.3
Smallmouth Buffalo	7	1.1	18.2-26.8	43.77	13.9
Freshwater Drum	7	1.1	14.5-28.0	29.41	9.4
Emerald Shiner	7	1.1	2.9-3.7	0.07	0.0
River Redhorse	6	1.0	19.2-24.9	28.94	9.2
Longnose Gar	6	1.0	23.8-27.6	10.26	3.3
Flathead Catfish	5	0.8	10.7-24.7	12.73	4.1
Bluegill	5	0.8	3.6-5.0	0.29	0.1
Spotted Sucker	4	0.7	7.3-18.3	4.76	1.5
Common Carp	3	0.5	17.3-21.6	13.10	4.2
River Carpsucker	3	0.5	17.3-17.9	8.18	2.6
Largemouth Bass	3	0.5	4.3-9.0	0.67	0.2
Slenderhead Darter	3	0.5	2.8-3.4	0.04	0.0
Blue Sucker	2	0.3	24.9-26.7	13.63	4.3
Smallmouth Bass	2	0.3	8.7-10.2	0.53	0.2
Quillback	1	0.2	18.3	3.34	1.1
Sauger	1	0.2	19.4	2.39	0.8
Silver Redhorse	1	0.2	16.6	1.94	0.6
Golden Redhorse	1	0.2	5.8	0.08	0.0
Logperch	1	0.2	3.6	0.02	0.0
Redear Sunfish	1	0.2	3.6	0.02	0.0
Bluntnose Minnow	1	0.2	1.9	0.01	0.0
Sand Shiner	1	0.2	1.9	0.01	0.0
Total - Species	609	100.0		314.09	100.0

DATE: 9/24/03

STATION: RM 106.4 Seine

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED (SEINING)

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotifn Shiner	671	51.9	0.8-2.3	0.75	28.1
Mississippi Silvery Minnow	254	19.6	1.5-3.5	1.12	41.9
Steelcolor Shiner	109	8.4	1.2-2.9	0.26	9.7
Bluntnose Minnow	85	6.6	0.9-2.1	0.14	5.2
Bullhead Minnow	73	5.6	1.1-2.4	0.14	5.2
Sand Shiner	53	4.1	1.2-2.0	0.11	4.1
Channel Catfish	13	1.0	1.2-3.0	0.03	1.1
Eastern Sand Darter	11	0.9	2.1-2.3	0.03	1.1
Ghost Shiner	10	0.8	1.7-1.8	0.02	0.7
Speckled Chub	5	0.4	1.9-2.1	0.01	0.4
Brindled Madtom	2	0.2	0.9-1.3	0.01	0.4
Central Stoneroller	2	0.2	1.7-2.1	0.01	0.4
Striped Shiner	2	0.2	1.3	0.01	0.4
Brook Silverside	1	0.1	2.4	0.01	0.4
Gizzard Shad	1	0.1	2.3	0.01	0.4
Mountain Madtom	1	0.1	1.5	0.01	0.4
Total - Species	1293	100.0		2.67	100.0

DATE: 6/15/04

STATION: RM 119.6 ElectrofishingNAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	88	42.3	3.9-13.0	30.00	16.2
Spotfin shiner	29	13.9	1.6-2.4	0.10	0.1
Mississippi silvery minnow	12	5.8	1.9-3.5	0.07	*
Spotted bass	12	5.8	2.5-11.8	4.71	2.5
River carpsucker	8	3.8	14.9-19.5	18.00	9.7
Flathead catfish	6	2.9	10.8-18.8	7.80	4.2
Freshwater drum	6	2.9	12.0-18.9	11.82	6.4
Longnose gar	6	2.9	20.4-29.2	11.25	6.1
Smallmouth buffalo	5	2.4	17.0-18.3	16.25	8.8
Steelcolor shiner	5	2.4	2.0-2.6	0.02	*
Black buffalo	4	1.9	21.4-31.6	39.50	21.3
Channel catfish	4	1.9	7.9-18.9	5.98	3.2
Longear sunfish	4	1.9	2.8-4.7	0.14	0.1
Bluegill	3	1.4	1.6-6.0	0.28	0.2
Silver redhorse	3	1.4	12.3-24.2	8.98	4.8
Blue sucker	2	1.0	25.5-26.1	12.25	6.6
Bullhead minnow	2	1.0	2.0-2.1	0.01	*
Golden redhorse	2	1.0	13.6-14.5	2.33	1.3
Shortnose gar	2	1.0	23.7-24.2	3.87	2.1
Bigmouth buffalo	1	0.5	23.1	7.25	3.9
Black crappie	1	0.5	10.2	0.65	0.4
Emerald shiner	1	0.5	3.3	0.01	*
Sauger	1	0.5	19.6	2.60	1.4
Shorthead redhorse	1	0.5	16.1	1.76	0.9
Total - 24 Species	208	100.0		185.63	99.9

* Less than 0.1%

DATE: 9/17/03

STATION: RM 119.6 Seine

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin shiner	19	46.3	1.1-2.0	0.02	14.3
Mississippi silvery minnow	11	26.8	1.4-2.4	0.04	28.6
Steelcolor shiner	4	9.8	1.6-2.4	0.01	7.1
Spotted bass	2	4.9	2.0-2.8	0.02	14.3
Blackstripe topminnow	1	2.4	1.6	0.01	7.1
Bluntnose minnow	1	2.4	2.0	0.01	7.1
Eastern sand darter	1	2.4	2.0	0.01	7.1
Sand shiner	1	2.4	2.0	0.01	7.1
Western mosquitofish	1	2.4	1.0	0.01	7.1
Total - 9 Species	41	100.0		0.14	100.0

DATE: 6/15/04

STATION: RM 129.7 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	96	37.9	3.5-11.1	9.78	8.2
Freshwater drum	18	7.1	7.3-19.2	18.53	15.6
Spotfin shiner	18	7.1	1.5-3.3	0.08	0.1
Spotted bass	18	7.1	5.5-13.0	7.30	6.2
Steelcolor shiner	12	4.7	1.4-3.0	0.06	0.1
Golden redhorse	10	4.0	9.8-14.7	7.25	6.1
Bluegill	9	3.6	3.4-8.0	1.26	1.1
Channel catfish	8	3.2	2.4-21.6	8.80	7.4
Silver redhorse	8	3.2	13.8-21.4	20.00	16.9
Smallmouth buffalo	6	2.4	16.0-22.3	23.45	19.8
Bluntnose minnow	5	2.0	1.9-2.9	0.03	*
Flathead catfish	5	2.0	10.1-18.0	3.76	3.2
Longear sunfish	5	2.0	3.2-5.3	0.30	0.3
Suckermouth minnow	5	2.0	2.4-3.1	0.04	*
Emerald shiner	4	1.6	2.7-3.1	0.03	*
Green sunfish	3	1.2	1.6-1.7	0.01	*
Highfin carpsucker	3	1.2	8.6-13.1	1.90	1.6
Mississippi silvery minnow	3	1.2	2.5-3.5	0.03	*
River carpsucker	3	1.2	13.8-15.3	4.10	3.5
Sauger	3	1.2	16.6-17.9	4.44	3.7
White crappie	3	1.2	6.4-9.0	0.64	0.5
Longnose gar	2	0.8	25.4-27.5	3.63	3.1
Bullhead minnow	1	0.4	1.9	0.01	*
Common carp	1	0.4	15	1.86	1.6
Largemouth bass	1	0.4	11.7	0.87	0.7
Northern hogsucker	1	0.4	3.2	0.02	*
Redear sunfish	1	0.4	7.1	0.32	0.3
Shorthead redhorse	1	0.4	7.3	0.15	0.1
Total - 28 species	253			118.65	

* Less than 0.1%

DATE: 6/15/04

STATION: RM 129.7 Seine

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Spotfin shiner	48	31.8	0.8-2.1	0.06	18.8
Western mosquitofish	35	23.2	0.9-1.7	0.04	12.5
Mississippi silvery minnow	18	11.9	1.3-2.5	0.07	21.9
Steelcolor shiner	14	9.3	1.2-2.6	0.02	6.3
Bullhead minnow	11	7.3	0.8-2.0	0.02	6.3
Eastern sand darter	7	4.6	1.5-2.1	0.01	3.1
Brook silverside	4	2.6	1.6-2.5	0.01	3.1
Bluntnose minnow	3	2.0	1.3-1.7	0.01	3.1
Sand shiner	3	2.0	1.1-1.7	0.01	3.1
Dusky darter	2	1.3	1.4-1.5	0.01	3.1
Spotted bass	2	1.3	1.6-3.2	0.02	6.3
Bigeye chub	1	0.7	1.8	0.01	3.1
Ghost shiner	1	0.7	1.7	0.01	3.1
Longear sunfish	1	0.7	1.4	0.01	3.1
Silverjaw minnow	1	0.7	1.7	0.01	3.1
Total - 15 Species	151	100.0		0.32	100.0

DATE: 6/15/04

STATION: RM 136.9 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Gizzard shad	57	30.6	4.4-11.6	10.51	6.9
Spotted bass	38	20.4	3.1-13.4	12.70	8.4
Mississippi silvery minnow	15	8.1	2.3-2.7	0.09	0.1
River carpsucker	10	5.4	14.7-18.5	22.25	14.7
Spotfin shiner	9	4.8	2.1-3.5	0.05	*
Channel catfish	6	3.2	2.5-22.5	8.39	5.5
Longear sunfish	6	3.2	3.1-5.4	0.49	0.3
Common carp	5	2.7	14.0-24.2	23.00	15.2
Golden redhorse	5	2.7	8.8-13.3	2.96	2.0
Longnose gar	5	2.7	24.7-36.7	10.75	7.1
Steelcolor shiner	5	2.7	2.1-3.2	0.03	*
Flathead catfish	3	1.6	9.4-14.5	2.16	1.4
Quillback	3	1.6	7.3-9.4	0.75	0.5
Silver redhorse	3	1.6	21.6-21.9	12.25	8.1
Smallmouth buffalo	3	1.6	15.4-25.0	13.75	9.1
Dusky darter	2	1.1	3.6-4.0	0.04	*
Bigmouth buffalo	1	0.5	23.6	8.00	5.3
Black buffalo	1	0.5	29	13.50	8.9
Black redhorse	1	0.5	10.7	0.40	0.3
Bluegill	1	0.5	7.8	0.46	0.3
Bullhead minnow	1	0.5	2.2	0.01	*
Chestnut lamprey	1	0.5	8.5	0.04	*
Eastern sand darter	1	0.5	2.2	0.01	*
Highfin carpsucker	1	0.5	11.9	0.82	0.5
River redhorse	1	0.5	24.5	6.25	4.1
Shortnose gar	1	0.5	24.2	2.00	1.3
Smallmouth bass	1	0.5	3.5	0.03	*
Total - 27 species	186			151.69	

* Less than 0.1%

STATION: RM 136.9 Seine

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

Total - 16 species

Date: 6/15/2004

STATION: RM 146.2 Electrofishing

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Mississippi silvery minnow	43	22.6	2.4-2.8	0.28	0.2
Quillback	31	16.3	4.5-13.3	3.13	2.2
Golden redhorse	23	12.1	7.1-21.0	33.50	23.9
Spotted bass	14	7.4	2.7-14.2	7.02	5.0
Gizzard shad	10	5.3	8.2-11.3	3.46	2.5
Channel catfish	9	4.7	6.6-24.9	13.63	9.7
Freshwater drum	8	4.2	11.4-15.3	10.76	7.7
Spotfin shiner	7	3.7	1.8-2.6	0.02	*
Suckermouth minnow	7	3.7	2.6-3.0	0.07	*
Smallmouth buffalo	6	3.2	16.9-20.0	21.50	15.3
Steelcolor shiner	5	2.6	2.2-3.4	0.05	*
Common carp	4	2.1	18.4-22.8	14.75	10.5
River carpsucker	3	1.6	13.5-15.8	4.30	3.1
Bluntnose minnow	3	1.6	2.5-2.8	0.02	*
Emerald shiner	3	1.6	3.3-3.9	0.05	*
Black buffalo	2	1.1	23.3-27.6	17.00	12.1
Flathead catfish	2	1.1	12.9-27.9	10.09	7.2
Sand shiner	2	1.1	2	0.01	*
Black crappie	1	0.5	10.6	0.68	0.5
Central stoneroller	1	0.5	2.2	0.01	*
Dusky darter	1	0.5	1.5	0.01	*
Harlequin darter	1	0.5	2.2	0.01	*
Longear sunfish	1	0.5	3.1	0.03	*
Mud darter	1	0.5	2.8	0.01	*
Northern hogsucker	1	0.5	3.7	0.02	*
Smallmouth bass	1	0.5	2.7	0.01	*
Total - 26 Species	190	100.0		140.42	99.8

* Less than 0.1%

Date: 6/15/2004

STATION: RM 146.2 Seine

NAME OF STREAM: East Fork White River

NAME, NUMBER, PERCENTAGE, SIZE, AND WEIGHT OF FISHES COLLECTED

COMMON NAME	NUMBER	PERCENTAGE	SIZE RANGE (INCHES)	TOTAL WEIGHT (POUNDS)	PERCENTAGE
Mississippi silvery minnow	183	44.1	1.8-2.9	1.05	61.0
Sand shiner	75	18.1	1.6-2.4	0.19	11.0
Spotfin shiner	75	18.1	0.8-2.3	0.09	5.2
Bluntnose minnow	19	4.6	1.3-2.1	0.04	2.3
Central stoneroller	16	3.9	1.9-2.5	0.07	4.1
Bigeye chub	14	3.4	1.6-2.1	0.02	1.2
Steelcolor shiner	8	1.9	0.9-3.4	0.02	1.2
Emerald shiner	5	1.2	1.6-2.0	0.01	0.6
Johnny darter	5	1.2	1.7-2.0	0.01	0.6
Quillback	3	0.7	3.7-4.1	0.11	6.4
Smallmouth bass	3	0.7	2.4-2.6	0.03	1.7
Eastern sand darter	2	0.5	2.1-2.2	0.01	0.6
Spotted bass	2	0.5	2.2-2.3	0.02	1.2
Blackstripe topminnow	1	0.2	1.4	0.01	0.6
Brook silverside	1	0.2	2.2	0.01	0.6
Channel catfish	1	0.2	2.2	0.01	0.6
Greenside darter	1	0.2	1.9	0.01	0.6
Silver shiner	1	0.2	2.8	0.01	0.6
Total - 18 Species	415	100.0		1.72	100.0